

Clinical Medicine and Surgery

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★ Editorial ★

Dr. Henry K. Pancoast

Pioneer in Radiology

IT is difficult, especially for the younger men in Medicine, to realize that radiology, which now plays such a large and important part in modern diagnosis and therapeutics, has been developed, *from its beginnings*, in the *present generation*, and that thousands of clinicians, now in active practice, began their professional careers without the benefits which this still-new science has since given them.

Among the bold and devoted men who, if they were not actually present at the accouchement of radiology, at least watched over its infancy and early childhood with jealous care, few, if any, had a larger share in bringing it to its present lusty adolescence than Dr. Henry Pancoast.

The elder Pancoast (Dr. Seth) came from a family of Quakers who came to this country with William Penn, and was a prominent physician in Philadelphia at the time of Henry's birth, February 26, 1875, and the boy was sent to the Friend's Central School, in his native city, for his elementary education, which he finished in 1892.

Though it was his intention to study medicine, both of his parents died at about the time he left the Friends' School, and the young man found it necessary to earn some money before he could begin his professional education, so he worked in a bank for two years, at the end of which time (1894) he entered the Medical School of the University of Pennsylvania, from which he received his degree in 1898, and in which he came under the influence of Dr. Charles L. Leonard, who was in charge of the first college x-ray department in

the United States, and developed the enthusiasm which was to make him famous.

In 1901, young Dr. Pancoast (then 26 years old) was appointed assistant instructor in clinical surgery and demonstrator in surgery at his Alma Mater; the next year he succeeded Dr. Leonard as "skigrapher" of the University Hospital and published his first radiological paper, "Cervical Rib"; and the following year (1903) presented one of the first studies of controlled x-ray doses to appear in the United States.

In 1906, with Worden, Sailer, and Davis, he reported the cause of the toxicity of bismuth subnitrate, and this work resulted in the adoption of bismuth subcarbonate and oxychloride, as roentgenographic contrast media, until they were largely replaced by barium salts.

In 1912, Dr. Pancoast became the first professor of radiology in the United States, at the University of Pennsylvania, and held that position until his death. The same year, he was elected president of the American Roentgen Ray Society, having been its secretary the preceding year.

In 1918, he was commissioned assistant surgeon (lieutenant, junior grade) in the Medical Corps of the United States Navy, but was placed on the inactive list the following year.

The United States Bureau of Mines appointed him consulting physiologist, in 1923, on account of his pioneer work on pneumoconiosis; and two years later, with E. P. Pendergrass, he made an important contribution to that subject.

In 1923, Dr. Pancoast was elected a fellow of

the American College of Radiology, of which he was a chancellor from 1924 to 1928; but before that he had served as secretary (1917) and president (1919) of the American Radium Society. In 1932, he was appointed chairman of the Section on Radiology of the A.M.A., and the next year he was elected president of the First American Congress of Radiology and first president of the American College of Radiology. He was also a charter member of the Philadelphia Roentgen Ray Society, a member of the executive committee of the American Society for the Control of Cancer, and a member of various other professional and learned organizations.

Besides the publications already mentioned, Dr. Pancoast contributed more than 100 papers and studies to the periodical literature of his specialty, besides the monographs "The Widening Field of Radiology" and "The Future of Radiology as a Medical Specialty" (1933), and the volume, "Reminiscences of a Radiologist" (1938).

In all his work in the new science, to which he contributed so extensively and valuably, Dr. Pancoast was a careful, thoughtful, and conservative student, writer, and teacher, so that his opinions, always based upon wide knowledge and experience and sound reasoning, carried enormous weight, both at home and abroad. His kindly and affable personality, his unselfish devotion to the welfare of his patients, and his unvarying loyalty to his associates, made him a power in his community, in his specialty, and in his profession, so that his absence will be sorely felt.

He came to the end of his busy and immensely useful but too-short career on May 20, 1939, after a short illness, and his fleshly garment lies in Valley Forge Memorial Cemetery, near the city where his active life was spent. But his valiant, pioneering soul goes marching on and his memory will be green as long as men reverence high endeavor and worthy achievement.

Nothing so conclusively proves a man's ability to lead others as what he does, from day to day, to lead himself.
—THOS. J. WATSON.

Medical Education

How much education does a man need in order that he may practice medicine satisfactorily?

The answer, promptly returned, is, "As much as he can get. No physician—or any other man, for that matter—ever knew too much."

That is a wise and proper answer, but the problem is by no means so simple as to be solved by a platitudinous declaration of that sort.

The men of a hundred years ago, after a variable amount of schooling—equivalent, perhaps, to our present eighth-grade instruction—"read medicine" and practiced for a year or two under some older doctor, attended a few courses of lectures at a medical school, and then set up for themselves. They never heard of basal metabolism, blood chemistry, x-rays, or a host of the other things which are everyday matters to us, but, at

that, they were no mean practitioners. One sometimes wonders if they did not know more about the actual management of sick people than many of us know. Such men as Gross, Gunn, Byford, Rush, Dewees, and hundreds of other eminent men developed under such a system. Did they compare unfavorably with our present highly-trained product?

Our fathers could and did obtain a medical education with an expenditure of time and money which did not saddle them with half a lifetime of indebtedness; many of them worked their way through; and they went out and *healed the sick* to the satisfaction of all concerned, even if they did not become millionaires. The respect, admiration, and love of the hundreds of people they had helped was wealth beyond anything that most of us are likely to acquire—and that is not sentimental bunk!

Today the boy who has a real *genius* for the practice of medicine is shut out, unless he also has ample financial backing. It is practically impossible for a man to do any amount of outside work and carry the present curriculum. The country boys, who would gladly go back to the smaller towns to practice, are disappearing from our medical schools. City practice, particularly in the specialties, is more lucrative than rural general practice and far easier—it does not require the resourcefulness and guts which the old family doctor possessed.

As a result of these conditions, many places remote from the larger cities are being left without regular physicians and must depend upon the osteopaths, chiropractors, *et id genus omne*, who are turned out rapidly and cheaply and are now licensed in most states. Would not these people be better off if they could have the services of a *doctor of medicine*—even if he could not read an electrocardiogram or diagnose a pathologic section?

How many of us ever make up bacteriologic media or make a chemical analysis of the blood or take a radiographic picture after we leave school? Almost every state now has a laboratory where all routine work can be done for the country practitioner, as we have our's done in the laboratory in the next block.

How much of the technical instruction, which took up so much time and cost so much money, do we actually use?

The high-school of today is better than the average college of our grandfathers. Do we truly believe that the training there obtained is insufficient to fit a man to take up the study of medicine? Or is our attitude merely a high-sounding pose?

For the man who, after five years in general practice, wants to specialize, we should furnish the most minute and detailed instruction in his specialty; but why should the prospective otolaryngologist spend precious hours in perfecting his laboratory technic? or the prospective research worker labor over the minutiae of brain surgery—which no general practitioner would be likely to attempt in any case?

We have no panacea to offer. This is not a problem which any one man, or small group of men, can solve. Much has been said and written about it already and there is nothing new here. The only purpose of this outburst is to get you keen and influential men thinking and talking about this thing, for it is *your* problem, in common with every other member of the profession, and if we do not find a solution reasonably soon, we are likely to wake up some morning and find it solved for us by the way of State Medicine or something of the kind, which will be wholly disastrous for the profession as a whole, as well as for individual physicians and their patients. Perhaps this may be one of the problems to be dealt with by the National Physicians' Committee for the Extension of Medical Service, when that highly promising organization gets into its stride.



In everything the middle course is best; all things in excess bring trouble.—PLAUTUS.



Ephemera or Gods?

WE all have spells of taking ourselves, our work and this age in which we are living very seriously, and when we overdo this we lose our sense of humor—which does *not* mean our ability to enjoy a joke, but is, in reality, merely our sense of proportion—and are in danger of becoming seriously entangled in the small affairs of every day.

An excellent antidote for inflation of the ego and for impatience with the leisurely march of progress is to attempt to orient oneself in time and in the universe.

If we let one hour represent the age of our world—which seems fair enough when we consider the uncounted millenia of cosmic time—and then begin to figure how long man has lived upon this earth we find, if we accept the Biblical account of man's beginnings, that the race has lived for about three-tenths of a second: If we go back, with the scientists, to *Pithecanthropus Erectus*, our history still covers *less than four seconds*. The Christian era began a tenth of a second ago.

This oblate spheroid upon which we scuttle about so actively seems, at times, like the core and center of the universe, and the things that transpire upon it appear to be the only affairs that matter. The astronomers tell us, however, that this little mass of the specialized energy which we call matter, is merely one of the minor satellites of that rather inconsiderable star which we call the sun, and that there are countless thousands of equal or greater stars, each presumably conducting its system of planets unerringly through the mazes of that vast galaxy of suns which is our lenticular universe; while outside of and beyond that are other universes larger, perhaps, than ours.

If we think along these lines for a little while we will lose our sense of the overwhelming importance of our own personalities and of this year of Grace, 1940, as a focal point in time, and be

able to watch the procession of events more or less as a philosophical bystander.

We must not, however, look only at this side of the question and permit ourselves to develop a fatalistic attitude. The statement that, from one standpoint, nothing which can happen to a man in his lifetime matters much; while, on the other hand, *everything* matters enormously, is paradoxical, but profoundly true.

We are *individuals*, possessed of some unit of power which differentiates each from all the others, and all of us from the lower orders of life, setting us off from the rest of creation as its highest present expression—call that spark the soul or what you will.

As individual lives we are parts of the larger manifestations of force which we call the solar system and universe, as each cell in our bodies is a part of that smaller manifestation of force which we call "I, myself."

The sound and healthy functioning of any organism depends upon the integrity and quality of each of its constituent cells; therefore the adequate and complete functioning of the Universe requires that every one of us shall realize his highest possibilities. Each of us is supremely unimportant, and at the same time supremely important.

If we will turn these matters over in our minds now and then, it ought to make us do each day's job, as it comes, the best we are able—and then *forget it*; nor worry about the days and jobs that are to come. It ought to improve our sense of humor and make this New Year the most truly satisfying one we have ever known.



The day which thou fearest so much, and which thou callest thy last, is the birthday of an eternity.—SENECA.



Poison Gas

A GOOD many people who are allowing themselves to become quite concerned about the possibility that poisonous gases may be used in Europe's phony war, are entirely oblivious to the fact that about as many people are "gassed" every winter in the United States as there were in any similar period during the World War.

The reason for this is that the symptoms caused by the poison gas that is doing the dirty work (aside from that which comes through the newspapers, which is even more dangerous) are so mild and insidious that the victim doesn't know what ails him until he is dead, and then he doesn't care. Our lethal chamber is commonly a garage, and the deadly vapor is carbon monoxide.

This gas, which does more harm than most people imagine, even when it does not kill directly, is invisible, odorless, and tasteless. It gives no warning until it is too late. That is why we have to *think* about it, consciously and frequently, during the winter, when it is most dangerous, and repeatedly jog the memories of the people who cannot (or rarely do) think for themselves.

Almost everybody who drives a car, these days, has been warned so often about letting the motor run in a closed garage that he *knows* the danger; but the number of times the pulmotor squad has been and will be called out this winter (frequently too late) proves that knowing and remembering are by no means the same thing.

Moreover, nobody will ever know how many of the cases where a car has been smashed up and the driver killed, without any obvious reason, have been due to that drowsiness, on the driver's part, which is one of the early symptoms of carbon monoxide poisoning, caused by the fact that, when all the windows of a car are closed tight, enough of the gas can seep up through the floor boards to cause this degree of toxicosis. Not very long ago, a woman was driving near Chicago, with her baby asleep on the back seat. When she reached her destination, the child was unconscious—gassed! A few more miles and there would have been another little white coffin.

Here are a few rules for safety that a ten-year-old can learn (unfortunately a good many drivers aren't that old, no matter how big they may be). Memorize them and repeat them, t.i.d. Tell them to your patients, your friends, and the other members of your family who drive, *repeatedly*.

1.—Before it winters up, have the exhaust system on your car carefully checked

and any leaky spots mended. If you haven't done that already, do it *now*.

2.—*Never* let the motor run in a closed garage; and as little as possible with the doors open.

3.—*Never* sit in a tightly closed car with the engine idling—or, for that matter, even when the car is moving. Keep a window open a crack—enough so there is some air circulation.

When any member of the family goes to the garage in the winter to take the car out, it will do no harm if, after a few minutes, some other member takes a look to see if he has actually *gone*—and it might save a life some time. The same precaution should be applied when someone drives in, and does not appear in the house after a reasonable period. It *might* be merely a "necking party"; but, on the other hand—

Nor are the garage and the car itself the only potential lethal chambers. Every house that is piped for gas is a possible candidate for that title. Those who *remember* this, and have "periodic examinations" made by an expert, will be safe. Look over again the *Seminar* problem in our Dec., 1939 issue, on page 495, and *think* about it.

And then go out and make yourself a nuisance, if need be, for the next three or four months. It will matter little that several hundred people have called you a bore, if, some day, one calls you his life-saver.

NEXT MONTH

(Special Young Physicians' Number)

A number of the older and more experienced physicians will contribute to a Symposium, telling their younger professional brothers about some practical matters which are not taught in the medical schools, but are learned only on the firing-line of clinical practice—or by personal instruction such as this.

Dr. C. Allan Birch, of London, England, will discuss, in a highly practical manner, the medical causes of the "acute abdomen."

Miss Pearl E. Wilson, R.N., formerly Director of Public Health Education for the State of Oklahoma, will suggest, in detail, the necessity of and requirements for a badly needed new specialty—Private Health Service.

Dr. H. I. Biegeleisen, of New York City, will outline the field for the injection of sclerosing solutions in the treatment of various disease conditions.

Dr. F. A. Wier, of Racine, Wis., will say some pertinent and helpful words about cultivating the relations between the young physician and young children.

The regular Departments will appear, but will be planned, as far as possible, for the special benefit of young physicians.

COMING SOON

"The Present Status of Shock Therapy in Mental Diseases," by G. Wilse Robinson, M.D., Kansas City, Mo.

"Spengler's Immune-Blood in Pulmonary Tuberculosis," by Joseph Hollós, M.D., New York City.

1940

*Hold your breath and watch some old things tumble.
Childish stuff to wring your hands and cry.
Eyes wide open, keep your ego humble.
We're going to live a lot before we die.—*

G. B. L., in Step Ladder.

★ *Leading Articles* ★

Spinal Anesthesia

By

CARL C. HOWARD, M.D., F.A.C.S., Glasgow, Ky.

IT is a long, rough trail from the office of Dr. Crawford W. Long, of Jefferson, Georgia, who gave the world anesthesia in the year 1842, to our present-day anesthesia.

To Koller and Corning are given the credit for the first use of cocaine for relief of pain. Back of them stands the American Indian of the Andes,

use 100 mg. of Metycaine in a 10 percent solution, and give 1 cc. of the solution mixed with 2 cc. of spinal fluid withdrawn when the puncture is made, in the second space above the anterior superior spine of the ilium. Never use a solution which, when mixed with the spinal fluid, is stronger than 5 percent or weaker than 3 percent.

For gallbladder or stomach operations, give 150 mg. of Metycaine (1.5 cc. of solution), with 2.0 cc. of spinal fluid, in the third space above the anterior superior spine of the ilium.

If possible, always give a spinal anesthetic with the patient lying on his side. Inject at the rate of 1 cc. every two seconds; then turn the patient immediately on his back, with the table in the Trendelenburg position about ten degrees, but keeping the head elevated on a pillow, to prevent

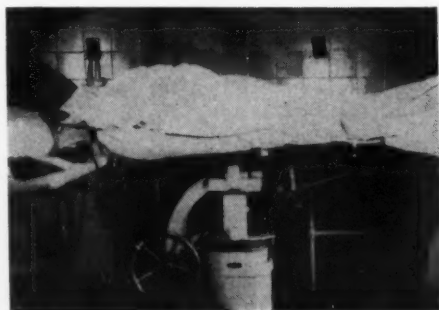


Fig. 1: Showing the Trendelenburg position with the head raised.

who was cultivating the coca plant when Pizarro conquered Peru.

My first use of spinal anesthesia was with Pitkin's solution, which was not entirely satisfactory. It was too slow and not easily controlled as to height. Next in order I used Neocaine, which was very satisfactory; then procaine and Pontocaine; last, Metycaine, which, so far, is best, as it gives a longer and more profound anesthesia without any added danger.

Indications

Spinal anesthesia is indicated in any and all cases where the patients are good enough risks to come to the operating room for surgery, for any condition below the diaphragm, except in the following conditions: (1) Those who seriously object to it (rare); (2) children who are highly nervous (I have used it in children four years of age); (3) known syphilis of the spinal cord; (4) infection at the point of puncture.

Dosage and Technic

The dose and the space injected depend upon the type of operation contemplated. For a simple herniorrhaphy or appendectomy, in an adult, I



Fig. 2: Anesthetist watching the blood pressure during anesthesia.

the anesthesia from reaching the cervical spine (see Fig. 1).

Ten minutes before the anesthesia is started, give $\frac{3}{4}$ grain (48 mg.) of ephedrine, hypodermically. The blood pressure reading should be checked and rechecked before the spinal puncture is made.

The anesthetist sits at the head of the patient, keeping watch of the blood pressure, respiration, and general condition (see Fig. 2), and talks quietly to the patient about things of interest to him, using oxygen, if nausea appears, and Adrenalin (epinephrin), 4 minims (0.25 cc.), intramuscularly, if the blood pressure falls below 80 systolic.

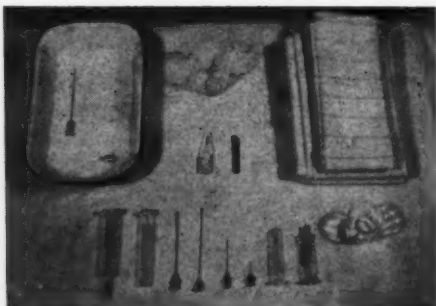


Fig. 3: Instrument table set up for spinal puncture.

If there is no marked anesthesia after fifteen minutes, do not hesitate to give another dose, as you have failed to inject the first dose into the canal.

Use a 19-gage spinal needle (the complete set-up is shown in Fig. 3), after injecting a little 1-percent Novocain (procaine) solution at the point of puncture. Insert the spinal needle through the skin and fat; then remove the stilet and gently push the needle forward until fluid drops from the distal end (see Fig. 4). Removing the stilet will help prevent injury to the cord.

Bring the patient to the operating room in bed, and return him to his room in bed, lying comfortably with a pillow for his head. I do not elevate the foot of the bed.

Nembutal (1½ grain [0.1 Gm.], for an adult) should be given one hour before operation; morphine (¼ grain [16 mg.] for an adult) is given just before completion of the operation.

In aged patients, or when there are vascular changes, the dose of Metycaine should be as small as possible.

Learn the details by *doing them yourself*. Be accurate. Measure the escaping fluid, using a Luer syringe to collect it. A needle, with the point broken off and heated, placed on the tip of the

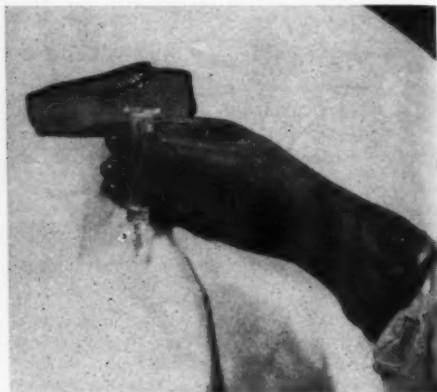


Fig. 4: Receiving spinal fluid in a syringe with a closed needle on the tip to prevent leakage.

syringe, will prevent leakage (see Fig. 4). Master the technic and use it daily, and you will be pleased with the results. The profound relaxation of spinal anesthesia adds materially to good surgery, often saving life.

I have not seen any deaths due directly to spinal anesthesia in 5,000 cases. Two cases of paralysis of the sixth nerve developed, which lasted three or four weeks. There were no other paralyses.

Times Bldg.

Nonoperative Orthopedic Technics

V. Hip and Sciatic Nerve

By

RUSSELL A. WINTERS, M.D., Chicago, Illinois

GENERAL common conditions producing sciatica and hip disorders are tuberculosis, contusions, fractures, infections, sacro-iliac malpositions, muscular contractions and pelvic disorders. The sciatic nerve may be distorted mechanically by ligament relaxations, sacro-iliac rotation, bony spurs, gluteus muscles contraction, or other muscle contractions along its course.

*This is the fifth of a series of eight articles.

A thorough knowledge of the anatomy involved in this region is essential in obtaining better end results. A muscular contraction, from either myositis or fibrositis, should be found, and through one skin puncture over the spastic portion, a series of injections should be made along its course, using a 25-gage, 1½-inch needle and a total of 2 or 3 cc. of Formo-Quinocaine ¼ to 1 inch deep, into each spastic point. After completing the series of in-

jections, relax the muscles, as shown below, and apply a proper support, when indicated. The amount

3). Satisfactory results have been secured by making injections in the sciatic nerve at its origin at



of force used in these manipulations should be determined by the patient's tolerance. If they cause pain, too much force is being used.

Injections of 4 or 5 cc. of Formo-Quinocaine should be made alongside the sciatic nerve, the space permitting it to encircle the nerve, where there is an extensive muscular involvement (see drawing

the lower lumbar vertebrae and into the sacral sciatic foramina, using a 25-gauge, 1½ inch needle, and a total of 4 or 5 cc. of Formo-Quinocaine, placed from ¾ to 1 inch deep into each space (see drawing on origin of sciatic nerve).

5 N. Wabash Ave.

Progress in Male Sex Hormone Therapy

(Testosterone Propionate)

Part II*

By

R. L. GORRELL, M.D., D.N.B., Clarion, Iowa

The Male Climacteric

IN the male climacteric testosterone is an effective method of treatment of the hypogonadal symptoms. As I have written previously³², "Volumes have been written and gallons of tears have been shed over the plight of the middle-aged woman, but her consort has rarely received a thought. If the loss of allure is a tragedy to the woman, the loss of virility is at least a semitragedy to the man. . . . As he does not have an objective sign, like the menopause, to call his attention to the basic cause of his unrest, he usually fails to realize that he is passing through a period of hormonal readjustment. . . . Unlike the woman also, his transition from full sex gland activity is a very slow and gradual process, which covers a period of many years (from the ages of 40 to 60)."

Contraindications: Testosterone injections will be of little avail if some psychic conflict with or distaste for the wife is present (several illustrative cases are presented below). It should not be given to senile men who wish to find out if "life begins at 70," with the stenographer or a young wife, because there is a very real danger of cerebral hemorrhage in old men during intercourse.

Case Reports

Case 1: A farmer, aged 52, complained of weak erections and lack of desire for and of enjoyment of intercourse. He received eight injections of testosterone propionate and reported marked benefit, as far as strength of erections was concerned, but still failed in the attainment of libido after receiving 200 mg. He referred to his wife as a "big Swede," thus explaining the lack of desire.

Case 2: A farmer, aged 38, complained of semi-flaccid erections, and premature ejaculation. This man was of a virile type and appeared ten years younger than his actual age. He habitually had intercourse three times weekly with his wife, and once or twice weekly with an 18-year-old girl, who lived in a neighboring town. Six injections of testosterone (a total of 150 mg.) restored strength to the erections, but he was frankly informed that he was over-estimating his powers.

Case 3: A railroad man, age 58, complained of failure of erections. In marked contrast to the two other cases, he desired intercourse only with his wife and has been much benefited by doses of 25 mg. of Perandren once every 10 days. He was given a few Benzedrine (amphetamine) sulfate tablets and told to take one-half of a tablet (5 mg.) at noon on those days when he expected to stay at home. He reported that he felt more alert after taking the Benzedrine (amphetamine), but

that intercourse was just as successful and enjoyable without. In older, lethargic individuals, small doses of thyroid extract and Benzedrine Sulfate were responsible for increased enjoyment, due to avoidance of fatigue and sleepiness at night.

Testosterone will be of little value to the man who masturbates (and not a few married men masturbate, especially if their wives are frigid) or those whose sexual practices are not normal.

Indications: Fatigue, emotional instability, irritability, hot flashes, vertigo, numbness and tingling of the hands and feet, mild depressions, atrophy and fibrosis of sexual organs, diminution or loss of sexual desire, sudden mood changes, crying, a tendency to seclusion, suboccipital tension, lack of interest in social and business life, lack of concentration, tachycardia and palpitation, and a feeling of inadequacy^{12, 18} are among the most common symptoms listed in these cases.

These symptoms are almost identical with those of the female climacteric, but relief is experienced more quickly with testosterone therapy in males than occurs with females while being given estrogen therapy.

"Early senility is markedly benefited, both in regard to mental activity and bodily well-being, and by the strengthening of weak, semi-flaccid erections."³⁶

Those physicians who feel that much of the subjective improvement is psychic, are invited to read Vest and Howard's report on the effects of testosterone on hypogonad patients³³. "Libido and potentia are definitely stimulated or brought on by testosterone injections, because several patients were told that the injections were for other purposes. . . . The improvement occurred after months or years of impotence. . . . Finally, a decrease in the size of the dose, without the patient's knowledge, resulted in a lowering of desire. The maintenance dose, to insure continuance of a satisfactory subjective status, is from 25 to 50 mg. per week."

Summary: Male sex hormone therapy should be considered in the treatment of men from the age of 40 to 70, who complain of symptoms caused by a decrease in testicular secretion. These symptoms are roughly comparable to those experienced by women during menopausal age. Care should be exercised in stimulating libido in the senile and the unfit.

Inhibition of Lactation

Kurzrok and O'Connell⁷ report that testosterone was decidedly effective in suppressing lactation during the puerperium. Relief was often experienced within 24 hours after the first injection. Doses of 25 mg. are given twice daily, and a total dose of 100 mg. may be given, although, if complete relief occurs after the second or third dose,

*This is the second installment of a three-part article. The third installment will appear in an early issue. The complete bibliography will follow the last installment.

no additional doses need be given. The puerperium is not otherwise affected by the hormone and there are no unpleasant after-effects. There is no tendency to recurrence.

Cryptorchidism

The literature has been filled with much rubbish on the values of endocrine therapy in cryptorchidism. Youngsters whose testicles were of the easily retractile type were treated with pituitary-like and testicular hormones, and a relaxation of the spermatic cord structures was hailed as a true descent. One observer followed a group of boys over a period of years, preceding and during adolescence, and found that a large percentage of the cryptorchids became normal without treatment of any kind.

Hamilton and Hubert³⁸ devised standard tests to differentiate spastic from true retention. Some 32 cryptorchid males received injections of from 5 to 20 mg. of testosterone propionate (Perandren), from 3 to 7 times weekly, over a maximum period of five months. The results included increased vascularity of the nasal mucosa; growth of the scrotum, prostate, and genital hair; and erections. Twelve (12) cases of pseudocryptorchidism were treated with amounts too small to produce penile and scrotal growth. In these cases, the testes were conditioned against spastic retention. True cryptorchidism was benefited, except in those cases in which, later surgery showed, the testicles were prevented from descending by mechanical resistance. A hypogonad individual, whose testes were not identified prior to treatment, was found to have testicles in the scrotum after treatment.

Impotence

Huhner⁹ reports that stubborn cases of impotence, which had not responded to any other form of treatment, including ligation of the dorsal vein of the penis, prostatic massage, stimulation with the sinusoidal-faradic current, weak silver nitrate instillations, and other care, over a period of years, have been cured by injections of Perandren (testosterone propionate, Ciba). From 10 to 25 mg. were given twice weekly, over a course of from two to three months.

Several personal cases, including Case 3, described under the male climacteric section, have been markedly benefited. One patient (Case 4) was not influenced at all, despite persistent therapy with testosterone.

Case 4: A man, aged 46, a worker in a specialized trade, and an enthusiastic churchworker, mentioned incidentally, during other treatment, that he was completely impotent, which was a great disappointment to himself and his wife. He had tried many varieties of treatment, including hormonal substances by mouth and by injection, yohimbine, and prostatic massage.

He received 17 injections of testosterone without experiencing much benefit. He would have weak erections, which would not last any adequate length of time. On analysis, it was found that the old church teaching, that intercourse was justifiable only for the purpose of rearing children, and otherwise was sinful, had been firmly established in his mind.

Despite the reading of erotic books (which inflamed his wife the more), he still cannot feel free to enjoy intercourse, just as some men are impotent with their wives and perfectly potent with

other women. A further course of therapy with testosterone is planned.

In other cases, testosterone, plus the reactivation of physical attraction between husband and wife (separate dressing and undressing, careful attire, little gifts, thoughtful consideration for each other, early retiring, before fatigue makes immediate sleep necessary) has worked wonders in uniting couples. Many lesser men fall into the error of which Will Durant writes in "The Mansions of Philosophy." "Some of it (prostitution) rests on the patronage of married men, who prefer a venal and venereal novelty to the boredom of laying siege to a surrendered citadel." If a prostitute is not a surrendered citadel, the imagination staggers to think of a comparison.

Functional Uterine Bleeding

Rubinstein⁹ has had successful results in the treatment of uterine bleeding. "Repeated injections inhibit the growth of graffian follicles and definitely inhibit ovulation. Five (5) mg. doses are given twice weekly during the week after the menses; then one injection weekly for two weeks; and then none until menstruation begins, after which the course is repeated. Bleeding stopped, in one overweight, hypopituitary, and secondary hypothyroid patient, within 6 days after the first injection."

Foss³⁷ reports satisfactory control of menopausal bleeding by injections of testosterone (40 mg.) every four days. Amenorrhea, of from 2 to 5 months' duration, followed the use of large doses by Geist⁸. The doses varied from 45 to 1000 mg. per month. Definite clinical improvement followed in 23 out of 25 cases, including several in which small myomas were palpable. Moderate-sized doses resulted in (1) normal menses, without interruption of regularity; (2) regular but scanty periods; (3) delayed but normal menses; or (4) missed periods over from 2 to 5 months. Suction biopsies revealed that the endometrium was menstrual and secretory in phase before treatment, and atrophic during treatment. Later biopsies indicated that the secretory phase of the endometrium tended to return after treatment was finished. The optimum dose was established at from 300 to 800 mg. per month.

Greenhill²⁵ writes, "Functional, excessive menstrual bleeding is checked by injections of from 50 to 100 mg. of testosterone; menstruation is delayed from 19 to 82 days, if injections are given as many as 18 times."

By single injections of 100 and 200 mg., respectively, I have been able to check menorrhagia for two periods in two women undergoing menopausal bleeding. When testosterone becomes less expensive, it may well be the treatment of choice. Anterior-pituitary-like hormone works well in most of these patients, but testosterone was effective in one case not affected by large doses of A.P.L.

Dysmenorrhea

Total doses of from 150 to 200 mg. may be all that is required to relieve dysmenorrhea, when given during the last two weeks of the period²⁵. Relief is often obtained without stopping menstruation. Rubinstein and Abarbanel⁴ report that testosterone relieved 19 of 26 patients with dysmenorrhea. Essential dysmenorrhea due to uterine relaxation is relieved promptly with doses as small as 5 mg., administered on the twenty-third and

twenty-fifth days. It has not been of as much value in organic or anatomically determined dysmenorrhea.

Peripheral Vessel Disease

Edwards, Hamilton and Duntley² have treated 7 male patients having organic vascular disease with crystalline testosterone propionate (Perandren). Four (4) were of arteriosclerotic origin and 3 presented typical signs of thromboangiitis obliterans (Buerger's disease). In all 7 patients, the involvement was major, with loss of the popliteal, femoral, and, in one case, the iliac pulsations. The absence of pulsation was checked by the Pachon oscillogram. The signs and symptoms were marked, including small ulcerations in 2 of the patients with Buerger's disease.

Testosterone propionate was given intramuscularly two or three times a week. Spectrophotometric curves, after treatment, showed an early and decided arterIALIZATION of the cutaneous blood. There was an increase in the systolic blood pressure in the hypotensive patients, a lowering of pressure in the hypertensive patients, and marked improvement in the walking ability of all patients, with delay or abolition of intermittent claudication. Two (2) patients were no longer subject to

night pain, which had troubled them previously. Subjectively, the patients reported an increased activity and a feeling of optimism.

Their attention was drawn to the general vascular effect of testosterone while studying the skin changes in human male castrates. With the recording spectrophotometer, they had noted that the skin of these patients showed a lack of arterial blood, although the more venous regions of the body contained an abnormally large amount of venous blood. After treatment with testosterone propionate, there followed an increase in arterIALIZATION and blood volume in those regions normally arterial, such as the head, palms, and soles. Less constantly, there was a diminution in volume of the blood in the normally venous areas, such as the lower abdomen and dorsum of the foot, attended by a shift in the contained blood to a more arterial type.

If such striking results can be obtained in this difficult field when large numbers of patients are treated, testosterone may well prove to be the therapeutic "find" of the 1940's. The benefit may be vasomotor in nature, but is nevertheless welcome.

(To be Continued)

Sclerosing Treatment of Hemorrhoids

By

CHARLES J. DRUECK, M.D., F.A.C.S., Chicago

THE treatment of hemorrhoids by means of sclerosing agents is sometimes referred to as the "American System" or as the "absorbing treatment." It originated with Dr. Mitchell, of Clinton, Illinois, in 1871, and for many years was used promiscuously by ignorant and irresponsible charlatans, as the "no-knife treatment." A great deal has been said, pro and con the efficiency and value of this plan of treatment.

Since its first introduction, much study has been given to the search for suitable injection fluids and improved technics, with a corresponding decrease in untoward complications and increase in satisfactory results, with return of the rectal wall to normal tonicity and elasticity. At present this method is used frequently, by reputable proctologists, as an ambulatory treatment of hemorrhoids which causes little or no pain and allows the patient to continue about his business during the course of treatment. If these advantages cannot be attained, the injection treatment is not a success and a radical operation is preferable.

Of the various causes which, in the past, have thrown the injection method into disrepute, may be mentioned the universal use of the method without selective discrimination of patients; use of fluids which have resulted in serious ulcers, sloughs, and abscesses; lack of adequate proctologic knowledge; and employment of the method by operators who have failed to acquaint themselves thoroughly with the technic.

Indications

A non-cutting treatment for hemorrhoids, prolapse, fissure, fistula, or any other rectal disturbance, presupposes that the patient is kept ambu-

latory, because, if the treatment or any complication requires him to go to bed, the end-results could probably have been secured better by surgery.

1.—The injection treatment is suitable for all internal hemorrhoids, including the uncommon nevus or strawberry hemorrhoids, which do not protrude but which frequently bleed profusely.

2.—I have found this method particularly satisfactory in tuberculous and cardiac cases and in aged patients. It stops the clinical symptoms, even when one does not expect a cure. In young and active persons, the injection treatment should be limited to the chronic, internal hemorrhoids, in which the predominating symptom is bleeding or protrusion or both.

3.—When the hemorrhoids are inflamed, with irritable and tightly contracted sphincter muscles, their radical removal is indicated. Such a condition usually is the result of a submucous or subcutaneous infection, which requires incision and drainage, as well as removal of the hemorrhoids, to bring about a complete cure.

4.—It is also waste of time to remove the hemorrhoids by ambulatory measures and then put the patient to bed for the relief of fissure, fistula, or other surgical complications; although hypertrophied papillae, skin tags, or polyps may be removed under local anesthesia, and thus in no way jeopardize the ambulatory treatment of the hemorrhoids. Terrell estimated that about seventy percent of the cases of hemorrhoids are amenable to office treatment.

5.—The injection treatment is always the method of choice when the patient is a poor surgical risk, but is applicable only to uncomplicated internal hemorrhoids, which, if they protrude, can be re-

placed. It is not suitable for the acutely strangulated hemorrhoid, with a tightly contracted sphincter. It can be used in all cases in which the rectal speculum can be introduced. External and thrombotic hemorrhoids, or acutely inflamed internal piles, must not be treated by this method. To do so would be excruciatingly painful to the patient and it surely would cause sloughing of the skin and underlying tissues.

6.—Patients who have become markedly anemic from long-continued bleeding from internal hemorrhoids, can have the bleeding stopped and be kept comfortable until they are in fit condition for operation.

Treatment by injection must be extended over a considerable length of time to be curative and therefore surgery is sometimes resorted to because of economic reasons, where the patient might be cured by less radical methods. Too many patients stop treatment as soon as their clinical manifestations disappear, which may be after the first treatment.

7.—Young people, under thirty years of age, may be promptly and apparently satisfactorily relieved of their hemorrhoids by injection treatment, but recurrences are almost certain within from two to five years. Such patients are better treated surgically. Hemorrhoids in young people are always associated with a cause other than local anorectal disease.

Selection of the Sclerosing Solution

Before deciding upon any particular sclerosing solution, it is obviously wise and proper to have a good working idea of what we wish the solution to accomplish, from a therapeutic aspect. The earliest idea of the treatment seems to have been to cause the hemorrhoids to slough out, and high percentages of phenol—even pure phenol—were employed, which had that effect. Probably this was responsible, to a large extent, for the evil reputation which treatment by injection used to bear. Nevertheless, it often had very satisfactory and permanent results, if the patient did not die of secondary hemorrhage or sepsis. If the sloughing was limited to the hemorrhoids themselves, the result was quite admirable. The aim of injection nowadays is *not* to induce sloughing of the piles.

Another error is to induce thrombosis of the hemorrhoids. It is true that thrombosis will cure the hemorrhoid, but the process is very painful and dangerous, because of possible embolism, sepsis, and pyelophlebitis. The consequence of this conception has been the use of solutions which are used in the treatment of varicose veins in the legs, with the express purpose of inducing massive thrombosis, such as quinine hydrochloride-urethane, sodium salicylate, dextrose, and sodium morrhuate. Good results are obtained by the use of these solutions, but they all involve a considerable risk and all are liable to cause considerable and prolonged pain and disability, and thus to bring the whole treatment by injection into undeserved disrepute.

The ideal sclerosing solution must:

- 1.—Have a low toxicity;
- 2.—Produce perfect sclerosis;
- 3.—Be painless;
- 4.—Possess bactericidal properties;
- 5.—Not produce any slough;
- 6.—Not produce allergic phenomena.

In this work we should aim to induce a mild, aseptic inflammatory reaction in the submucous tissue, with an outpouring of fibrous exudate into the connective tissue stroma, which leads to adhesions between the mucous and muscular coats of the rectum. As this sterile inflammation subsides, it is followed by organization of the exudate, shrinkage incident to the resulting fibrosis, and obliteration of the submucous space in which run the blood vessels which supply the hemorrhoids. When properly performed, it will be found that, after an interval of a few weeks, the varicose tumor has contracted to a thin, fibrous mass, firmly attached to the rectal wall. This is the reaction sought for, but if too-large quantities or too-strong solutions are used, sloughing or abscess may occur.

The search for an ideal sclerosing agent has developed many substances. The more successful ones, at present, being solutions of phenol, and quinine and urea hydrochloride. I prefer a 5-percent solution of phenol in a pure vegetable oil (olive oil, almond oil, or cottonseed oil). This formula, originating with Mitchell, is the oldest and, through many vicissitudes, is still a favorite. It is prepared from the pure, undiluted phenol crystals, liquefied by heating in a water bath, and then dissolved in pure vegetable oil to make a 5-percent solution. All water in the solution must be evaporated, as any water so remaining is fatal to its successful use. The solution must be freshly prepared for each case.

Boas has been very successful with 70-percent carbolyzed alcohol. This is better reserved for fibrous hemorrhoids. A local anesthetic is always required when alcohol is injected, to avoid severe pain.

Morley recommends, for most cases, 20-percent of carbolic acid in equal parts of glycerine and distilled water. If inflammation of the pile exists; if the patient is unusually sensitive to pain; or where a first injection is followed by severe pain, he uses 10 percent of carbolic acid. The objections he makes to the weaker solution are that the injections have to be repeated oftener and that the piles are more likely to recur, and confesses that his objections to solutions containing other ingredients and having other strengths of carbolic acid that 20 percent are "all more or less theoretical."

More recently, the use of quinine and urea hydrochloride in a 5-percent strength has been brought to prominence by Terrell.

The dose of the quinine and urea solution varies from 0.5 to 1 cc., the smaller dose being given to individuals with high blood pressure or tuberculosis, whose tissues do not react well to injections of the drug, and to pregnant women, so that there can be no bad effects from the quinine.

The discomfort, pain, or sense of pressure in the rectum, frequently complained of by patients after hemorrhoids have been injected, may be prevented to a large extent by using quinine and urea 5 percent, in a 1:1000 solution of Nupercain, instead of in the plain distilled water, ordinarily employed.

The earlier technic of injecting used a sufficient quantity of strong phenol solution (25 to 50 percent strength) to cause the tumor to slough away, but this always left an ulcer to heal by granulation. Though this method often produced a cure, it was responsible for so many complications that it fell into disrepute with the profession.

My preference as to the solution used is for:

‡ Phenol (crystals)oz. $\frac{1}{2}$ — 16.0 Gm.
Zinc chloridegrs. 6 — 0.4 Gm.
Glycerineoz. 4 — 120.0 cc.
Made up fresh each day.

The popular plan of procedure today injects a small quantity of a weak solution, sufficient only to set up irritation and plastic exudation. This ob-

structs the circulation and produces a thrombophlebitis, causing shrinkage and atrophy of the pile without slough and ulcerations. This method affords the maximum of good results with a minimum of complications. When carefully performed, in selected cases, the results compare favorably with the best of other treatments.

58 E. Washington St.

Hydrochloric Acid in Diabetic Coma

(A Preliminary Case Report)

By

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MRS. C., age 25, weight 130 pounds, not knowing that she had diabetes, two weeks previous to her critical illness had eaten a heavy meal containing a great deal of fat meat. During these two weeks, she ate a great deal of starch and fat in pastry, and says that she could taste fat all this time.

On the evening of November 11, 1938, after having fat chicken soup for dinner, she began having difficult breathing, which soon grew worse until she was gasping for breath. A physician was called. Her condition continued to grow worse and she was taken to a hospital at 3 A.M. November 12, in coma. Her condition became more and more alarming. The attending physician informed the husband that there was slight hope for his wife's recovery.

Since I had formerly attended the family at times, the husband asked me to take charge of the case, and the attending physician graciously gave me the assignment. This was at 5 P.M.

Briefly, the data concerning the condition of the patient on Nov. 12 showed: Stupor, 3+; air hunger, 3+; temperature, 97.4° F.; pulse, 120; respiration, 24; urine, 2,600 cc., with sugar 4+, and acetone 4+; blood sugar, 702 mg. percent; white blood cells, 28,600.

It will be seen this was a critical condition, in which an effective, quick-acting therapy must be used if a life were to be saved. Here was a case of diabetic acidosis (ketosis), with all its implications, even to a near-termination from suffocation. It was evident that oxidation of the carbohydrates and fats was almost suspended, so that that asphyxiation, due to lack of carbon dioxide stimulation of the respiratory center, was rapidly progressing to complete suffocation. She was, of course, given insulin—150 units.

The picture was one of incomplete combustion due to oxygen deficiency. The chain of thought which led me to this decision ran something like this: I had been interested in carburetion, or the proper introduction of air into burning fuels, for a long time, so when I recalled that Dr. Roth¹ could nearly double the oxygen in the red blood cells in thirty minutes, by the intravenous injection of 10 cc. of 1:1000 hydrochloric acid, I believed that this method might be effective in this case. Then I further recalled that Miss Moorman², of Joplin, Mo., made a practice of resuscitating her laboratory animals, quickly and with very little sickness, after profound anesthesia, with such a

solution; that Dr. MacGlivra³, of Harvard Dental School, had resuscitated a man, apparently dead by an anesthetic accident, with HCl; and that Dr. Burr Ferguson⁴ had restored a young man to near-normal in thirty minutes after he had been thoroughly drunk with "corn whiskey" for a week, with an intravenous injection of this acid solution.

A few weeks previously I had attended a man, about seventy years of age, who was gasping for breath, when, for lack of any other medication at hand, I quickly gave him 5 cc. of 1:500 HCl solution intravenously. In less than five minutes he fell back on his pillow, ceased struggling, and had a period of normal sleep. He lived for several months after that, without further treatment, for his condition immediately improved. I believed that the spark of life could be fanned to living fire, in this case of asphyxia, by an intravenous injection of hydrochloric acid, in addition to the insulin.

When this injection (5 cc. of 1:500 HCl) was given to the patient at 5 P.M., she was comatose; her eyes were rolled back until the pupils were obscured; she was unable to speak or recognize those about her; in fact, had all the signs of deep coma.

After giving the injection I turned to a table to put away my syringe, then went back to the bed, and saw that her eyes were open and in them was the light of recognition; her breathing was easier; and she seemed less distressed. I asked her if she knew me, and she said she did and spoke my name. The time elapsed between giving the injection and her recognition of me did not exceed five minutes. She was given another injection (20 cc.) of the acid at 8 P.M.

It may be suggested that this quick result was a mere coincidence and not due to the HCl, but the further progress of the case indicates that such a suggestion is not well founded. I might add that the patient fully regained the use of her senses and full recognition of her surroundings at the end of the third day at the hospital. On the day she was discharged, her leukocytes numbered 7,100 and her urine sugar was 4+.

On November 13 she received 40 units of insulin and 20 cc. of 1:500 HCl at 3 and 8 A.M., and 2 P.M.; Nov. 14, 55 units of insulin and 20 cc. of HCl at 2 and 8 P.M.; Nov. 15, 50 units of insulin; Nov. 16, the same acid injections and 60 units of insulin; Nov. 17, one 20 cc. injection of acid, at 8 A.M., and 60 units of insulin; Nov. 18, no acid, 60

units of insulin. From Nov. 13 to 19, inclusive, she received 4 ounces of 1:500 HCl, by mouth, daily.

Discussion

I believe it will be interesting to speculate upon and analyze this condition, and particularly this unusual result.

A condition comparable to incompletely burned carbohydrates and fats in the body is seen in the combustion of hydrocarbons (oil, gasoline, etc.). The particles of gasoline must be finely subdivided and separated to allow sufficient contact with air for perfect combustion. When the carburetor on an automobile does not vaporize the gasoline properly, the results are diminished power and carbonization of the piston head and spark plugs, from imperfect oxygenation.

The smoky flame in an oil lamp, the smoke that comes from a factory or residence chimney, or the exhaust of the car; the soot in the chimney and the furnace, and carbon in the engine, are all due to imperfect combustion or insufficient oxygen. When the mileage per gallon of gasoline is increased for your car, there is better carburetion, better oxidation, less smoke, and more power.

The gases that produce flame are hydrocarbons, somewhat different from sugar, starch, and fat in structure, it is true, but nevertheless composed of hydrogen and carbon and requiring oxygen, very skillfully added, for their complete combustion and the formation of carbon dioxide (CO₂).

Dr. Burr Ferguson⁵, in his book, "Facts and Phagocytes" (p. 54), tells of a remarkable increase of oxygen in the red blood cells, as follows:

"Dr. Roth's report . . . follows: 'The following table shows the changes in Dr. Edmonson's red cells, in the venous blood, after the injection of 10 cc. of a 1:1000 solution of hydrochloric acid:

Specimen No.	Time	O ₂ Content	O ₂ Capacity	% Saturation	Hemoglobin	CO Comb. Power	pH of Blood	% Cell Vol.
1.	11:20	8.56	21.85	39.2	16.3	70.37	7.48	36.0
Inj. HCl	11:25							
2.	11:55	14.69	20.96	70.1	15.6	64.46	7.50	34.5
3.	1:35	5:95	18.38	32.4	13.7	64.43	7.49	35.2
4.	4:45	7.34	20.30	36.2	15.1	63.34	7.45	33.5

"The above figures show that the injection of hydrochloric acid intravenously does not materially change the O₂ capacity of the blood, but the O₂ content is markedly increased in 30 minutes after the injection. The CO combining power is decreased and remains at a lower level for several hours. Similar results were noted in several other cases, except in one instance, in which very little change occurred in the CO combining power only.

"I suggest that an increased oxygen content of the blood is readily, though roughly, observed by merely noting the change in the appearance of the blood to a brighter color."

Diabetic coma is due to acidosis or ketosis—the formation and retention of the ketone bodies acetoacetic acid, B-oxybutyric acid, and acetone. The ketone bodies are the residual results of incompletely oxidized or burned fats in the body. The burning of fat in the blood is promoted by the burning of carbohydrates.

Macleod⁶, in his "Physiology and Biochemistry in Modern Medicine," says: "For the thorough combustion of fat in the animal body, a certain amount of carbohydrate must be simultaneously

burned. Fat evidently is a less readily oxidized foodstuff than sugar; it needs the fire of the burning sugar to consume it. If the carbohydrate fire does not burn briskly enough, the fat is incompletely consumed; it *smokes*, as it were, and the smoke is represented, in metabolism, by the ketones and derived acids. Such a closing down of the carbohydrate furnaces may be brought about either by curtailment of the intake of carbohydrates, as in starvation, or by some fault in the mechanism of the furnace itself, as in diabetes."

Stengel⁷, in his "Textbook of Pathology," supports this view and states it in another way: "The oxidation of one molecule of glucose is necessary for the conversion of each molecule of fatty acid into CO₂ and water. If this glucose is not burned, fat metabolism produces an acid body, acetic acid, and forms other acid bodies—acetone and B-oxybutyric acid. These are known as ketone bodies. Their presence in excessive amount (more than can be neutralized by the reserve alkali or ammonia) results in acidosis. The acid bodies act injuriously by abstracting base from the tissues, and possibly by their direct toxication."

MacCallum⁸, in his "Textbook of Pathology," in speaking of imperfectly burned fat, remarks: "It seems probable that the great amount of fat taken in the food of some diabetics may afford material for the intensification of this production of poisonous acids, and Allen has emphasized this in his Harvey lecture." It will be remembered that this patient had eaten a liberal amount of fats during the two weeks previous to her illness.

There is an increase of blood fat in diabetics. In a normal person, after a fatty meal, the increase of blood fat begins in about an hour and reaches its maximum in about six hours. But in this case it is evident that fat metabolism was so much dis-

turbed that the normal decrease of blood fat after fatty meals did not take place. This was, no doubt, due to the fact that the carbohydrate fire was too low to consume the fat.

An instructive table is given by Macleod⁹, titled, "Blood Lipoids in Normal and Diabetic Persons." It shows the degree of diabetes by the percentage of fat in the blood, determined by Bloor's method.

	Normal %	Mild Diabetes %	Mod-erate D. %	Severe D. %
Whole Blood	0.59	0.83	0.91	1.41
Plasma	0.62	0.90	1.06	1.80

The effect, then, of incompletely burned fats shows, not only in the formation of ketone bodies, but also by an abnormally increased fat content in the blood. It would appear that an estimation of the blood fat, as well as blood sugar, is important as a double check on a diabetic's condition.

We know that combustion requires oxygen, and that it must go on in order to supply the CO₂ necessary to stimulate the respiratory center and maintain normal breathing. The result of insuf-

ficient oxygen, hence insufficient carbon dioxide, is air hunger—labored, rapid breathing, more or less cyanosis, depression, and stupor—in other words, asphyxia. Suffocation is due to complete stoppage of air. The chart shows that this patient's air hunger was 3+.

There seems to be a certain relationship between respiration and the leukocyte count, in some instances. This is seen in infections and inflammations, in which the pulse and respiration rates and the number of leukocytes are increased. Since the white cells have phagocytic power, it may be that these cells are increased for the purpose of destroying the excess waste due to increased heart and lung activities. Exercise produces the same increase in pulse, respiration, and white cells, temporarily.

In this case the pulse was 120; respiration, 24; and white-cell count, 28,600—a relationship much beyond normal. This extreme leukocytosis, without a bacterial infection, was probably the terminal leukocytosis that occurs just before death. Apparently the white blood cells were ineffectively attempting to perform a certain function (probably the destruction of the ketone bodies) but the introduction of dilute hydrochloric acid relieved them of this work, as shown by the drop in the white-cell count.

The whole picture was one of oxygen deficiency as the basic factor in the case. Alkali, the classical treatment for acidosis, in large doses, might have neutralized the acids, if the metabolic processes were such as to allow contact of an extraneous alkali with the ketone bodies; but it probably would not have produced the quick effect that the body's only inorganic acid, HCl, did. It probably would not have kindled so quickly the necessary fire for the combustion of carbohydrate and fat. Something was needed to arouse and make available the oxygen in the blood—a catalyst-like

substance to start the fires to burning again. Hydrochloric acid, 1:500 dilution, given intravenously, did this.

Summary

1.—In this case, the ingestion of fats was excessive for one having diabetes.

2.—There was an excess of carbohydrate and fat in the blood.

3.—The metabolic mechanism was disordered, carbohydrate combustion was impaired, hence fat combustion was suspended, which resulted in the formation of ketone bodies and acidosis.

4.—Dilute hydrochloric acid intravenously, in addition to insulin, caused the liberation of oxygen and started the burning of carbohydrate and fat, thus reducing the ketones and relieving the acidosis and coma.

5.—The white blood cells, being relieved of their phagocytic function—destruction of foreign bodies—soon returned to normal.

6.—The distinctive factor that was primarily responsible for the acidosis was a deficiency of available oxygen for the destruction, not the neutralization, of the acid ketone bodies.

7.—Laboratory examinations for oxygen content of the blood were not made, but the rapid clinical response under hydrochloric acid administration was satisfactory support of the oxygen deficiency theory.

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Notes from the International Medical Assembly

Part II*

Reported by

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ILEOSTOMY AND COLOSTOMY

By Richard B. Cattell, A. B., M. D., F. A. C. P., Boston, Mass.

AN ileostomy is much harder to manage than a colostomy and is less frequently performed since the advent of methods for draining the duodenum from above. It is used in ileus and small-bowel obstruction; in cases of ulcerative colitis, with cicatricial contractions or hemorrhages, which are resistant to treatment and where the colon must be given complete rest; and in acute toxic conditions.

In these cases it is necessary to protect the skin around the stoma from irritating secretions by (1) slow, continuous drainage, using a water-suction apparatus; (2) by painting the skin with alum-

inum or bronze powders, suspended in amyl acetate; (3) by Kaolin powder; or in other ways.

In accidental traumatic ileostomy, the stoma may be closed at once by the button method (see Fig. 1). When the wound is healed, the closure can be released by merely cutting the thread that holds the buttons in place.

For a complete transverse ileostomy, spinal anesthesia is best. Bring out a loop of ileum a few inches above the ileocecal valve, making the stoma just below and to the right of the navel; ligate and divide the two loops of blood vessels in the mesentery; do no exploration beyond locating the ileocecal valve, as infection might thus be spread; do not remove the appendix; paint the surrounding skin with two or three coats of compound tincture of benzoin; divide the ileum at the loop, so that the proximal end will project considerably,

*This is the second and last installment of a two-part article.

and insert a tube into it; apply slow suction drainage immediately.

These cases are messy and not easy to take

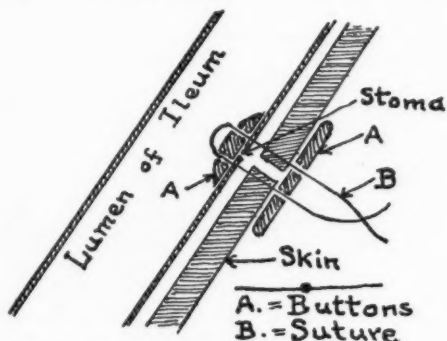


Fig. 1:—Diagram of the button method of closing a traumatic ileostomy.

care of, but the discomfort is the price the patient must pay for his life.

Colostomy is performed for obstruction of the colon and diverticulitis, and is generally a temporary measure, except where the rectum or rectosigmoid is resected for carcinoma.

The stoma is made in the lower abdominal quadrant, with good projection of the bowel end. If the patient is very thin, fix the skin to the rectus muscle. Then it will make no difference how fat he may become later.

Prescribe a low-residue (constipating) diet, and give an irrigation (enema), at the same hour each time (so as to establish a regular habit), every 48 or 72 hours. The patient must be assured that this is perfectly safe, and taught to do it himself. In giving the irrigation, use an ordinary enema bag with a shut-off valve, and a No. 22 French catheter.

With this plan, if the patient is carefully trained, even a permanent colostomy is not unduly distressing, as he does not have to wear a special apparatus, but merely a small gauze pad over the stoma, held in place by a belt or girdle and changed twice a day.

INCREASED INTRACRANIAL PRESSURE

By Eric Oldberg, M. D., F. A. C. S., Chicago, Ill.
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Coll. of Med.

The generally accepted theory is that the cerebrospinal fluid is a transudate from the choroid plexus in the lateral ventricles of the brain, and consists of little more than water. The amount transuded in 24 hours is from 4 to 8 liters, but the amount constantly present is relatively small (from 120 to 140 cc.) The excess is absorbed by the arachnoid villi.

Increased intracranial pressure may result from a tumor or abscess in the brain, or from injury.

The symptoms of brain tumor are well known. The increased pressure results from the actual bulk of the new growth, and is more acute if the tumor grows rapidly. Moreover, such a growth may occlude a large vein and cause stasis, this increasing the pressure. If the tumor blocks the

cerebrospinal circulation, high intracranial pressure develops early.

In any injury to the head, we may find shock, edema, and actual injury to the brain itself.

If shock is present, it should be treated first, by the usual methods, because edema cannot develop while the condition of shock persists.

Brain injury must be left alone, because nothing can be done for it, except to keep the patient quiet. If the injury is severe, edema compresses the bleeding vessels and stops the hemorrhage; but this is not true in slight injuries. Thus increased intracranial pressure is helpful in traumatic cases, but injurious in all others. Post-traumatic edema reaches its acme in from 12 to 48 hours, and then subsides.

In treating increased intracranial pressure, in a conscious patient, give concentrated solutions of magnesium sulfate by mouth or rectum. In unconscious patients, give hypertonic (50 percent) solutions of dextrose, sucrose, or sorbitol, intravenously, in doses of from 150 to 200 cc. Magnesium sulfate solutions, given intramuscularly or intravenously, are useless, and this drug is a depressant.

Lumbar puncture, repeated as frequently as necessary for from 12 to 72 hours, but no longer, is frequently helpful, but has certain disadvantages and objections. It should not be done if the patient is obstreperous, as it disturbs him too greatly. There is no danger that the cerebellum will herniate with the foramen magnum in head injuries. The amount of fluid removed at each spinal puncture is small, but the cerebral blood supply is improved during the operation and for an hour or more afterward. Puncture is not needed if the patient dies soon in shock, nor in those patients who are comatose after the edema subsides.

Subtemporal decompression is not justified solely for the relief of increased pressure, except in rare, severe cases, but only where there is extensive hemorrhage, in order to ligate the bleeding vessel.

THE MANAGEMENT OF OBESITY

By Robert W. Keeton, M.D., Chicago, Ill.,
Prof. of Med., Univ. of Ill. Sch. of Med.

When a farmer starts out to fatten hogs (which have a digestive system closely similar to that of men), he knows that the only factor in weight is calories (fats, carbohydrates, proteins, and water do not matter, in reasonably healthy people, except as sources of calories), and his faith is justified by the results. The weight and the caloric intake go up and down together.

If a patient will cooperate sincerely, there is no mystery and no problem in weight reduction, except the psychic and orthopedic problems. If the food intake is reduced, the basal metabolic rate falls, as a measure of tissue conservation, in normal people, but not in fat ones, who have such an excess of tissue that there is no necessity for nature to conserve it.

Some people (but not very many) have endocrine disorders—acromegaly, lipodystrophy, or Cushing's disease. Basophilic hirsutism is sometimes mixed up with obesity (the androgens in the urine increase), but is probably an entirely separate affair, due to adrenal or pituitary dysfunction.

Some cases of psoriasis, dermatitis vegetans, leg ulcers, and postoperative hernias improve markedly when the patient's weight is reduced.

Obesity is a *disease*, and it can be controlled, if the patient has sufficient will power and an adequate motive; but it is almost always a *hard job*. Weight reduction, however, works psychic as well as physical transformations.

Changes in the diet should always be *quantitative*, and in some few cases, qualitative also. Obese people almost always show an abnormal mobilization of insulin; therefore the diet should be of such a character that it will not stimulate the insulin response.

Patients who are on reduced diets should be careful to add adequate quantities of the necessary vitamins, and to include *plenty of protein*, so as to conserve the muscular system and others which are relatively poor in fat.

INDICATIONS FOR CESAREAN SECTION

By Nicholson J. Eastman, A.B., M.D., F.A.C.S.,
Baltimore, Md.

Prof. of Obst., Johns Hopkins Univ. Sch. of Med.

In the past 25 years, the relative proportion of cesarean sections to normal deliveries has increased 500 percent in our maternity hospitals, and probably from 100 to 300 percent in the country as a whole. This is a serious situation, when we realize that an abdominal delivery is *seven times as dangerous* as a normal one.

The *general*, but by no means always *imperative* indications for cesarean sections are: (1) Marked disproportion between the size of the passage and that of the passenger; (2) a history of previous cesarean section; (3) placenta previa and abruptio placentae; and (4) *non-convulsive* toxemia.

A surgical delivery is always a heavy responsibility, as it makes the woman a permanent obstetric cripple. Here are some warnings and *contraindications*, which should be carefully considered and heeded.

1.—Beware of performing a cesarean section solely on the basis of *external pelvic measurements*. Consider the *type* of the pelvis, rather than its *size*. The external and internal conjugates are not on the same plane. If the diagonal (internal) conjugate is 11.5 cm. or more, there is plenty of room for a normal baby to pass. If it is smaller than that, carry out *x-ray pelvimetry*, which shows that only 5 percent of pelvis are below the normal size.

2.—Never recommend a cesarean section solely on the basis of a long labor. The longer the labor, the greater the danger. A clumsy operation, performed *early*, is safer than an expert one performed *late*. Uterine inertia *alone* is never an indication.

3.—Never perform a cesarean section on account of fibroids, unless they are actually blocking the birth canal at term. Ovarian cysts are more troublesome, and should be removed as soon as they are diagnosed.

4.—If there has been a previous cesarean section, *hospitalize* the patient *early* and observe her carefully. If the previous operation was *fully indicated*, another is sure; if not, it will be needed only if the scar is weak and there is danger that it will rupture. The higher the scar, the more danger of rupture.

5.—If painless vaginal bleeding occurs in the last trimester of pregnancy, 20 miles from a hospital, *do not make a vaginal examination or pack the vagina*, but take the patient, *along with her hus-*

band and several friends (as possible blood donors) to the nearest hospital, *promptly*.

6.—Never perform a cesarean section for *ecclampsia only*. At Johns Hopkins Hospital we have, since 1922, treated 300 such cases with sedatives, quiet, digitalis, and *waiting*, with a mortality of only 11 percent.

MIGRAINE

By Harold G. Wolff B.S., M.D., A.M., F.A.C.P.,
New York City

Asso. Prof. of Med., Cornell Univ. Med. Coll.

Migraine is a periodic headache, usually unilateral, familial, usually in the temporal or parietal region (though it may occur elsewhere), and often accompanied by nausea, vomiting, and other symptoms. It is the result of dilatation of the carotid artery and its branches. Pressure around the head relieves migraine pain. Ergotamine tartrate (Gynergen) is the best remedy, but other vasoconstrictors will also relieve it.

Treatment of an Attack

Put the patient to bed in a *dark room* and give 0.5 mg. of Gynergen *intramuscularly*, followed by divided doses by mouth, up to a total of 10 mg. This treatment must not be given more than once a week, and *never* to those who have organic disease of the heart, kidneys, or liver, nor to pregnant women.

Codeine, 1 grain (64 mg.), with Aspirin (acetosal), 5 grains (0.325 Gm.), will *relieve the pain*, by *raising the pain threshold*, as well as doses six times as large, but does not touch the *cause*. Gynergen relieves the cause and the pain, but does not raise the pain threshold.

Ninety percent of patients with true migraine are *ambitious* persons, who are not well adjusted to the circumstances of their environment. The same type of people may develop peptic ulcer instead of migraine.

The factors in the *prevention* of migraine are: (1) a feeling of security and confidence; (2) a biologic shock, followed by a long rest; (3) correction of emotional upsets and the inculcation of a sound and philosophic life pattern; (4) about 60 percent of these patients are helped by obtaining a full *understanding* of their trouble; the more "flexible" the patient, the better the result.

In *summary*, stop acute attacks of migraine with Gynergen; prevent or ameliorate them by appropriate psychotherapy.

THE CLINICAL USE OF DIGITALIS

By Drew W. Luten, M.D., St. Louis, Mo.
Asso. Prof. of Clin. Med., Wash. Univ.
Sch. of Med.

Digitalis has been used (1) as an emetic (it is a heart poison in emetic doses); (2) to relieve cardiac edema; (3) as an ointment; (4) in tuberculosis; (5) vaguely for "heart disease"; (6) to slow the ventricular beats in auricular fibrillation and tachycardia; (7) to prevent heart failure in pneumonia and other infections; (8) to improve the circulation in congestive heart failure, and also to prevent it.

Digitalis is helpful in *congestive heart failure*, whether or not it is accompanied by fibrillation, and whether or not the drug slows the pulse. Do not give enough to produce nausea!

Its diuretic effect is due to the improved action of the ventricular muscle. It lessens the *size* of

the heart, whether that organ is normal or dilated, so it makes the normal heart less efficient.

It is unreliable in auricular fibrillation, unless that condition is accompanied by congestive failure. If one is not sure of the cause of the fibrillation, try digitalis: If it slows the heart, go on with it; if not, stop its use, unless the ventricles are dilated, in which case, go on anyway.

Dosage

The therapeutic zone of digitalis begins with 25 percent of the lethal dose; the toxic zone with 50 percent; the optimum dose is usually about 35 percent of the lethal dose, but larger doses may be given in severe cases of heart failure.

The larger the dose, the more the excretion. Give small, repeated doses (200 to 300 mg. daily) until the desired effect is produced, and then adjust the maintenance dose.

Withering told the story! Let us study and practice his teachings.

INTERRELATION OF THE ENDOCRINE ORGANS

By Elmer L. Sevringhaus, M.A., M.D., F.A.C.P.,
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Prof. of Med., Univ. of Wis. Med. School

The endocrine organs are the agents of the "homeostatic" (self-defense) mechanisms of Cannon—nutritional (thirst and hunger), reproductive, fear, and other "reflex" behavior; and here are some of the mechanisms.

Thirst: Increased salinity of the blood stimulates the postpituitary to decrease the urinary output and the water balance readjusts.

Hunger (the need for sugar) is caused by an increase of insulin, storage of glycogen, changing of sugar into fat, and a decline in the blood sugar to the fasting level or below it. This results in a release of glycogen to replace the sugar. If this does not occur, there is a stimulation of adrenal secretion which speeds up the process. The adrenal cortex hormone, the anterior pituitary, the thyroid, and the pancreas are all necessary for storage.

Diabetes is "the inability of the body to metabolize sugar."

Hypoglycemia or **hyperinsulinism** may cause emotional disturbances (especially in young people) or a feeling of weakness. If we replace some of the carbohydrate in the patient's diet with fat, this slows digestion and the storage of glycogen.

If sex maturity develops slowly, gigantism may result from lack of epiphyseal closure. Growth and sex development are both governed by the pituitary, and are well correlated. Growth stops as puberty is established. Sex power is low in gigantism and acromegaly. The sex life unfolds after growth is completed. The gonadal hormones stimulate the development of the secondary sex characters, male and female, and the urge to mate and raise a family.

The climacteric (in both sexes) calls for readjustments of many body functions; which results in overbalance, in some cases.

The adrenal medulla (epinephrin) increases the respiration, circulation, blood sugar, reflex activity, blood coagulation, etc.

The adrenal cortex is necessary to life—circula-

tion, storage of sugar, chemical balance in the cells, etc.

All hormones are catalysts. They speed up the chemical processes of the body in all fields of life. The physician who does not know endocrinology does not fully know any human being.

MANAGEMENT OF THE CLIMACTERIC

By Emil Novak, B.A., M.D., F.A.C.S.,
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After the climacteric, in women, the sex life is often fuller and more satisfactory than ever before, and skinny, angular women often become more attractive.

Many symptoms often charged to the climacteric are really due simply to the ageing process; some to too-heavy responsibilities; some to psychic causes, such as fear. Many people need no endocrine treatment at this time.

True climacteric symptoms are vasomotor—"hot flashes," sweating, etc. Dubious or secondary symptoms include irritability, dizziness, insomnia, headaches, etc., which are much like those of psychasthenia.

Cessation of ovarian function occurs because the ovaries have reached the end of their life span, the same as an individual does, if he is not cut off earlier by accident or acute illness, and these organs can then no longer be stimulated by the pituitary. This causes readjustments of endocrine functions.

During the period of nubility, the estrogenic and gonadotropic hormones balance each other. When the estrogenic function of the ovaries ceases, the pituitary increases the gonadotropic hormone. Substitution therapy with estrogens works well, in cases where it is definitely indicated, after individual study.

Explain to the patient the fallacy of the reputed relation between cancer, insanity, frigidity, etc., and the climacteric, and give her advice regarding a life regime and a satisfying philosophy.

If vasomotor symptoms are severe, distressing, and long continued, help may be needed. These are frequently worse under emotional stress and upsets, and are linked to the higher brain centers. Remember that, in younger women, menstrual disorders may be caused by mental and emotional shocks and stresses. "The pituitary is the brain of the primitive (autonomic or endocrine) nervous system."

Estrogen therapy is now objective and accurately measurable—it is really chemotherapy. Most estrogenic preparations now on the market contain what the manufacturers claim, and are stable.

The best method is to give oily solutions intramuscularly, when the symptoms are severe (5,000 to 10,000 International Units), for a few injections, to relieve the symptoms; then give the estrogen by mouth (5 times the intramuscular dose) until the next exacerbation; and carry on, as needed, until equilibrium is established.

There is no evidence that any cancer has actually been caused by estrogens in human beings (whatever may have happened to animals, after huge doses), in spite of the millions of units that have been given to thousands of women.

The keynote in the management of the climacteric is to individualize and use common sense.

Physical and Office Therapy and Radiology



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X-Ray Studies in Gastroenterology*

MUCOUS membrane relief studies are now used on all obscure gastro-intestinal cases. For this purpose, one may use equal parts of barium and water, thoroughly mixed; or one of the more expensive prepared mixtures (Rugar, Umbrathor); or one tablespoonful of Unibaryt, mixed thoroughly with two tablespoonfuls of lukewarm water; or the yolk of one egg added to plain barium.

Esophagus: The patient is given a level teaspoonful of Rugar while in the standing position. Under fluoroscopic observation, one can see this small quantity passing downward. If the esophagus is normal, the walls are intact on all sides and the mucous membrane is smooth and regular in outline throughout. The separation of the esophageal walls by the bolus of barium shows the normal flexibility. Any irregularity in the lumen can be recognized, whether caused by some mucosal modification (tumor, constriction, foreign body) or by external pressure. If a deformity or irregularity persists on repeated films, disease is indicated, as the normal mucous membrane changes constantly.

Stomach: Following the esophageal studies, the stomach is examined. After taking one teaspoonful of Rugar, the stream of barium (in the normal stomach), at its entrance from the cardia, passes smoothly over the lesser curvature and then drops down to the lower pole of the stomach. The walls are in contact and are smooth. There should be no accumulation of fluid in the lower pole of the stomach.

Under abnormal conditions, one can see, for example, the barium passing over an irregular surface of a carcinoma anywhere along the body of the stomach. If the stomach contains an abnormal amount of secretion, the barium reaches the level of the fluid, spreads out something like a shower passing through the liquid, and then accumulates as a pool at the bottom of the stomach. This gives us information as to the amount of re-

tained fluid in the lower pole and, in itself, is a clue to the disease that is present. If there is no fluid present, the patient should roll from side to side and anteriorly and posteriorly, until all walls of the stomach are coated with the barium mixture. I then make one or more films which record the various mucous folds in an empty stomach.

If a special problem is to be worked out, one may use the effervescing technic (1½ teaspoonfuls of barium, mixed with three teaspoonfuls of sodium bicarbonate in a small quantity of vichy water; this is followed by one teaspoonful of tartaric acid and a crystal of citric acid, in the same medium), which permits the stomach to be examined while distended and with a barium coating of the walls—a double-contrast method.

If one observes peristaltic waves moving to a point at which rigidity begins, and then, as the wave continues on the other curvature, the waves begin again after it has passed the area of rigidity, one may suspect an ulcer. Roentgenographic evidence is best obtained by taking three exposures on a single film, at intervals of one second (the value of each exposure must be somewhat diminished, to prevent overexposure).

Gallbladder studies: The double dye method is the most dependable. Two teaspoonfuls of paregoric are given two hours after the midday meal, which should contain fat. Tetraiodophenolphthalein (3.5 Gm.) is then given, and the paregoric and dye repeated after supper, which may consist only of toast, crackers, jellies, fruits, and fruit juices (no fat).

At 8:30 the following morning (14 hours later), a film is made in the vertical position and then a general film of the upper abdomen in the supine position, so as to record the size, outline, and position of the liver and gallbladder. The patient is then placed in the prone position and a film made in the normal gallbladder area. If the organ is well filled, the patient is given 3 egg yolks and 2 ounces of cream. A film made 20 minutes later will commonly show both the cystic and the common

*Rev. Gastroent., May-June, 1939.

duct. The gallbladder is examined each half hour, so as to demonstrate non-opaque gallstones, which may not be shown in the full gallbladder. Emptying should be complete in from 30 to 90 minutes.

By taking gallbladder pictures in the vertical position, Akerlund has been able to find evidence of sedimentation layers in the gallbladder. Calcified stones settle at the bottom; sand or nonopaque stones are in the mid-position; and inspissated bile floats on top.

Pitressin: The injection of 0.5 cc. of Pitressin will cause gas shadows to disappear in from 30 to 45 minutes. This injection may be repeated in one-half hour if necessary. Benzedrine (amphetamine) Sulfate may be given by mouth, to relax gastric or pyloric spasm.

GEORGE E. PFAHLER, M.D., Sc.D.
Philadelphia, Pa.



Rheumatic Inflammation of Muscle

THE scars that follow attacks of rheumatism are similar, except in extent, to those resulting from injury, but they do not develop adhesions to bony points; hence, treatment by deep friction, given as hard as, and for as long as, the patient can stand it, is of paramount importance. These areas are merely inflamed, not infected, and thus may be given massage.

The treatment of acute fibromyositis is heat, massage, and rest; of chronic fibromyositis, massage and active exercises.—J. H. CYRIAX, M.D., in *Brit. J. Phys. Med.*, July, 1939.



Look for **FACTS AND COMMENTS** among the advertising pages at the back.



Short-Wave Treatment in Gynecology*

LONG observation of the ills of women force the conclusion that inflammatory diseases of the pelvis are the chief factors in chronic invalidism. Heat and rest have always been the first line of treatment of pelvic inflammation. Hippocrates, in 450 B.C., prescribed hot douches. The sufferings of women were of small account in the Moslem world, where the law of Mohammed forbade male investigation or interference.

Hot douches relieve pain, aid in the absorption of inflammatory exudate, and result in the improvement of uterine circulation. The Elliott bag is a successful, safer adaptation of the method.

After 20 years of experience with diathermy and 5 with short-wave therapy, it is my belief that the latter is definitely superior. Under the influence of this deep and homogenous heating, the dense hardness of the vaginal vault softens as the exudates disappear, and cicatricial tissues and adhesions become stretched, more vascular, and thinner. Short-wave therapy alters the permeability of the cell membranes, stimulates the circulation through the parts treated, and greatly increases the speed at which blood corpuscles travel through the capillaries. Thus tension is reduced and pain relieved as inflammatory exudates are absorbed.

There is a marked improvement in the patient's

general condition—appetite is increased and weight is gained, sleep is improved, the fatigue and irritability that accompany chronic pelvic disease disappear.

Technic: The patient should lie on a couch, on her sound side, the side to be treated being uppermost, in order to avoid concentration on the posterior electrode, or else in the supine position, on a suitable couch of latticed wood, with one electrode behind the sacrum and the other behind the flexed thighs. Failing this, a canvas deck chair does very well.

In all acute cases, it is well to begin with short treatments of five minutes, with distances of from 10 to 15 millimeters. Long treatments during this stage invariably produce pain. Only the mildest degree of warmth should be experienced. Daily treatments are given, with an occasional rest, and the time is increased carefully to 20 minutes. After ten days, the treatment is given three times weekly. *Masses as large as an orange will gradually disappear under this type of treatment.*

JUSTINA WILSON, F.R.C.P.
London, Eng.



X-Ray Treatment in Bronchiectasis

TO establish definitely the place of roentgenotherapy in the treatment of bronchiectasis, I chose for treatment only those patients who had been previously observed over a period of many months and were known to have a chronic lesion with a sustained high level of expectoration, without marked spontaneous remissions. All these patients were thoroughly investigated by bronchography and bronchoscopy.

Moderate-dosage roentgenotherapy, as the sole method of treatment for chronic suppurative bronchiectasis, is feasible and successful, resulting in symptomatic improvement in a considerable number of cases (practically complete cessation of the expectoration and cough). These patients have been followed for six years, and no recurrences with upper respiratory infections have been noted.—M. BERK, M.D., in *Radiol.*, June, 1939.



X-Ray Diagnosis of Intestinal Obstruction

THE diagnosis of intestinal obstruction by means of flat films of the abdomen, rests entirely upon the recognition of large amounts of gas in the small bowel, or a lack of continuity of the gas column in the large bowel. Demonstration of the Kerkring folds indicates that the distended loop is a section of small intestine.

Difficulties in diagnosis are usually caused by technically poor films. The Kerkring folds are as delicate as the fine bronchial markings of the lung. Whenever possible, the patient should be moved to the roentgen-ray table, and a high milliamperage used to cut down the exposure time to a fraction of a second. Multiple views, in the prone and supine positions, are often necessary.

Gas in the small bowel is not sufficient to warrant a diagnosis of obstruction. The relative size of the colon and small bowel must always be remembered. An early obstruction may manifest it-

**Brit. J. Phys. Med.*, Aug., 1939.

self by a visualized distension of only one isolated loop of small bowel. A collection of gas near the midline (patient in the supine position) should always be considered with suspicion. The serrations of the Kerkring folds can usually be differentiated from the haustral markings of the colon: The latter are coarser, do not cut through the entire colon, are wider apart, and are associated with the characteristic central white knob. The colon normally contains gas. An incomplete barium enema may be given to exclude colon distention.

—N. S. ZEITLIN, M.D., in *Radiol.*, Nov., 1939.

X-Ray Diagnosis of the Retrocecal Appendix*

THE routine 12-hour meal oftentimes reveals the appendiceal outline, but it often fails to give enough filling of the cecum to demonstrate the presence or absence of rotation. Likewise, the opaque enema may give an excellent outline of the cecum, but fail to fill the appendix.

One sign we have found almost pathognomonic: Normally, the ileum appears to enter the medial side of the cecum. If the ileum apparently enters the cecal tip (inferiorly), and cannot be dislodged by manipulation, we know that we are dealing with an incompletely rotated cecum and that the ileocecal valve and appendix must be in a retrocecal position. We have followed a great many of these cases to operation and have had the accuracy of these observations verified.

Failure to complete the various stages of development leads to the occasional placement of the appendix in situations that complicate the diagnosis, if the appendix should become inflamed, and may also interfere with the customary surgical attack. The roentgenograms permit exact localization of the appendix preoperatively.

F. E. BUTLER, M.D.
I. M. WOOLEY, M.D.

Portland, Oregon.

X-Ray Demonstration of Submucous Myomas

MORE satisfactory results have been obtained in the radiographing of the uterine cavity by the use of 100 percent Hippuran (Mallinckrodt), which is introduced into the cavity by means of a 20 cc. syringe and uterine cannula, which must be kept warm. A bullet forceps grasps the anterior cervix lip and the cannula is introduced so that its tip is just above the internal os, the rubber or metal acorn engaging the external os to prevent regurgitation. A roentgenogram is taken when the uterus is well filled. From 5 to 15 cc. are needed in fibromyomatous uteri, under pressures ranging from 40 to 150 mm. of mercury.

After the roentgenogram is taken, the Hippuran is withdrawn into the syringe and the cannula removed. Two or three minutes are allowed for the uterus to empty itself. Then another syringe, filled with 20 cc. carbon dioxide, is attached to a clean cannula, 1 or 2 cc. being discharged into sterile fluid to displace the air contained in the uterine cannula. The cannula is introduced into

the uterine cavity and the carbon dioxide injected until a sense of resistance is reached which is similar to that experienced during the Hippuran injection. Another roentgenogram is now taken.

Submucous myomas (fibroids) are beautifully delineated in the second film, although often they are not visible in the first film, or are not sharply defined.—I. C. RUBIN, M.D., F.A.C.S., in *Am. J. Obst. & Gynec.*, Jan., 1939.

★ News ★

Man-Made Radium

DRS. J. M. CORK, J. Halpern, and H. Tatel, of the University of Michigan, have succeeded in making "artificial" radium E and radium F (polonium) by bombarding bismuth, in the cyclotron, with particles of deuterium ("heavy hydrogen"). These man-made substances emit alpha particles, the same as natural radium.

★ Books ★

Varicose Veins Ochsner and Mahorner

VARICOSE VEINS. By ALTON OCHSNER, B.A., M.D., D.Sc. (Hon.), F.A.C.S., William Henderson Professor of Surgery and Director of the Department of Surgery, School of Medicine, Tulane University, New Orleans, La.; and HOWARD MAHORNER, B.A., M.D., M.S. (Surg.), F.A.C.S., Assistant Professor of Surgery, School of Medicine, Tulane University, Fifty Illustrations; Two Color Plates. St. Louis: The C. V. Mosby Company. Price, \$3.00.

BRIEFLY, clearly, inexpensively, one may here find all that is necessary to know in order to treat varicose veins successfully. Here will not be found the voice of the wild-eyed radical, with his claims of unvarying success, but rather the words of the conservative surgeon who knows anatomy and clinical disturbances, who is not afraid to reveal failures and their reasons, and who studies until he is sure.

Ochsner and Mahorner believe that many of the tests for determining patency in the great veins of the leg are partial or complete failures, and have devised a comparative tourniquet test, which, together with the Trendelenburg test, makes up the only diagnostic procedures necessary.

The physician will do well to study their discussion on contraindications. Contrary to the belief of many enthusiasts, they feel that varicosities occurring during pregnancy should be treated conservatively, inasmuch as the great majority tend to disappear after the pregnancy is over. Any impairment of arterial supply by arteriosclerosis or thromboangiitis obliterans must be construed as a definite contraindication to injection therapy, because of the danger of reaction and edema in poorly nourished tissues. A drop of histamine is placed on the skin of the leg and several punctures made through the drop in the skin with a fine needle. If a red flare occurs promptly (2½ to 5 minutes), there is an adequate arterial blood supply.

Ligation, injection, the application of the paste boot and elastic bandages, all are well and simply described and illustrated.

This is a "must" book for the surgeon and physician who wish to treat varicose veins adequately.

**Radiol.*, Dec., 1938.

A Living for the Doctor

The Business of Medicine and the Art of Living



Associate Editor: Ralph L. Gorrell, B.S.M., M.D., D.N.B.

Postponing Our Own Funerals*

FUNERALS as a rule are cheerless occasions.

Particularly is this true of one's own funeral. Personally, I am quite willing to postpone the event indefinitely. Since I saw a photoplay reproduction of Dante's "Inferno" a few weeks ago I am more in favor of it than ever. After all, this is a fine old world and I'd like to stick around. Of course I want to be well, free of pain, able to work and play, and to be somebody. I am not wanting to be one of those individuals who dies slowly at about the age of fifty, and then has the funeral postponed for twenty or thirty years. After a person ceases to amount to anything, three days is enough for him to serve as the centerpiece of the floral display.

How can we postpone the evil day when we drop by the side of the road? How can we remain, not merely alive, but efficient, happy, attractive, interesting, and interested? That, if you please, is my major occupation—I mean it should be. I am in business for my health—except when I forget and do as I did the other day. Would you believe it? I sent for the undertaker the other day. I asked him to come two weeks sooner than he was due, and he eagerly enough promised not to disappoint me. Oh he'll not forget it, don't worry! I forgot that day that Nature is an accurate book-keeper and so I made a big entry on the debit side. Fool! But much as we all like to live, we are, every mother's son of us, committing suicide every day, and some of these days we are going to be sorry for it.

Three score and ten. Well so far as I am concerned that's too short. It is like a one-week summer vacation when you had planned for two weeks. I admire the group of young men, all over eighty, who organized the Centenarian's Club of Los Angeles. Each solemnly swore, when he took the oath of the order, that he would live to be one hundred years old. If he died before that time there was a very severe penalty attached. The penalty was death and expulsion from active membership in the club. The average length of life has been so rapidly increasing in recent years that it will not be long until we must revise this three score and ten idea. During the Dark Ages the

average life was nineteen years, in 1800 it was thirty-three, in 1855 it was forty, and in 1920 it was 58.

How long should a man live if he gets the right start and then takes care of himself? Suppose we look into the life of other animals. Other mammals live about five times as long as it takes them to become mature, as determined by the ossification of their bones. For instance:

A dog is mature at about 2 years and is old at 10 years.

A cow is mature at about 3 years and is old at 15 years.

A horse is mature at about 5 years and is old at 25 years.

A man is mature at about 25 and, at the same rate, should live to be *one hundred and twenty-five* years old.

All in favor of this new arrangement signify their assent by standing. The vote is unanimous, except for a few who are too near dead to stand on their feet. So let's strike out for the new goal. This seventy-years plan cramps one so! One has barely gotten one's family raised by that time.

And we're on our way! Bobbed-haired grandma is younger than her mother was at twenty. My father has often told me that, though he could remember his mother when she was thirty-eight he could not remember when she was not known as "old Aunt Rhoda." I remember the same dear old lady as a jolly and vivacious companion at eighty-eight. The smooth-faced young man of to-day is aghast when he finds that the picture of his grandfather, with a full beard, was taken at his own age. Imagine a modern youth of nineteen writing "Thanatopsis"! He is more interested in the sport page, and I believe he is right. Oh, the solemn, pained and world-weary expression on those faces peering out of the past, a la daguerrotype! No wonder they died young. They died in self-defense. Many people think that folks lived longer in the old days than they do now. It isn't true. The time just *seemed* longer.

But how do we go about putting a boycott on the undertaker? Well, it's something like religion—easy to preach and hard to practice. But like religion it is very much worthwhile, and even if the effort doesn't actually bring us to the Promised

*Reprinted from *Bul. Ind. St. Board of Health*.

Land, it will at least greatly benefit our bodies, as will its counterpart benefit our souls. Come to think of it, is not the practice of the principles of health very nearly a proper part of our Christian religion? We are told at church that we should obey the laws of God. But are not the laws covering proper care of our bodies the laws of God?

Kermit Roosevelt is said to have remarked, on one occasion, "The only trouble with Dad is that when he goes to a funeral he wants to be the corpse." I guess we understand what the boy meant, and it is likely that his Dad would have denied any desire to fulfill the wish, in the literal sense. These days we are planning our lives rather than planning our funerals, as used to be a common custom. Why, I knew a woman once who had all the songs picked out, the text for the minister's sermon, the clothes she wanted to wear on the occasion, and all of the other gruesome details. Worse than that, even all her neighbors, friends, and relatives had heard the plans over and over. I imagine they gave a sigh of relief when the actual funeral was all over and no mistake made. One likes to see things through as planned, you know.

Let's put it off as long as possible and think about it only when seeking means of forestalling it. After all, I suppose the best preparation for the next world is to live properly in this.

THURMAN B. RICE, M.D.

Indianapolis, Ind.

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SEND FOR THIS LITERATURE

When to Specialize

HISTORY shows that, as knowledge has increased, some men have collected the new facts along a certain line and have become specialists. It is often argued that, as the old specialists had a background of general medicine, all specialists should begin in general practice. But the reason the old timers did not begin as specialists was because there was no special knowledge. To argue, therefore, that the specialist now should begin with general practice is as reasonable as to say that because I began with a horse and buggy, others should begin with a horse and buggy and work up through the Model T to a Packard.

It is argued that experience in general practice was valuable to the specialists because it offset any tendency to an unduly narrow viewpoint. Thus a backache indicates to an orthopedist something which requires a cast or brace; a gynecologist will suspect that it indicates the need for a pelvic operation; but only one with general experience will think first of lumbago.

There is a measure of truth in this, but it applies only to those who make their diagnosis by exclusion. A specialist who recognizes the positive lesion before him is not likely to fall into this error. *A specialist who sees in every complaint something that belongs to his specialty is simply not a good specialist.*—ARTHUR HERTZLER, M.D., in "The Horse and Buggy Doctor" (Harper and Brothers).

[The man with several years of experience in general practice is much more apt to make a good

specialist than is the man who lacks such experience. Dr. Hertzler's simile in the first paragraph above looks all right on first reading, but a little thought shows that it is superficial and unsound, because it oversimplifies the problem.—Ed.]

Sonnet to a Soporific*

AN, slender cylinder of bitterness,
Thy green translucency shall tinge the stream
Whereon, between enchanted reed and cress,
My phantom boat shall drift into a dream.
Thy bitter snow, by some strange alchemy,
Shall cool my fevered blood, and heal the shock
The savage nights have dealt that stealthily
Stole by my bed to stab me with a clock.

"Blessings on him who first invented sleep."

Well said! But when the old invention fails,
My choicest blessings I prefer to heap
Upon the man who treats the one who ails.
Bless him who first compounded this small pill,
And him who doth prescribe it when I'm ill.

TOM CHEKOURAS.

Early American Dentists

DESPITE the fact that our Pilgrim fathers, in 1636, brought into the colony from London "some physicians, an apothecary, and three barber surgeons"—the latter to do the dental work—the profession of dentistry in America, as a distinct calling, did not come into its own until 150 years later.

Famous dentists in Colonial and Revolutionary days were James Mills; Isaac Greenwood, father of John; John Baker, teacher of Paul Revere (who could "fix teeth as well as any dentist who ever came from London and in such a manner that they are not only an ornament, but of real use in eating and speaking"); Josiah Flagg; and John Greenwood, dentist to George Washington.—*Mouth Health Quarterly.*

State Medicine is poorhouse medicine.
Tell your patients.

Malpractice Suits†

MALPRACTICE suits have all the characteristics of a contagious disease, inasmuch as they are sporadic, endemic and, at times, epidemic. During the past ten years of economic stress and social unrest the "suing habit" has reached a peak. As in epilepsy, one attack predisposes to another, so that the recovery of damages in one instance stimulates and encourages a second and third attempt. Today the malpractice menace has assumed major proportions and calls emphatically for remedial measures. It is a wave which threatens us all unless we halt its menacing progress.

Though it is a bitter truth, it must be acknowledged that behind each damage suit there is a

*Chicago Tribune, ("The Line") Dec. 12, 1939.

†Am. J. Med. Jurisprudence, Sept., 1938.

physician instigator. No malpractice suit could possibly gain legal action without medical testimony and support. The solution obviously lies within the medical profession. Doctors talk too much about their colleagues to their patients, and too much to the patients about themselves.

The average physician is a poor witness. He becomes easily confused on the stand, and gives to the jury an impression of uncertainty. He is easily flustered. If he had previously been fully informed of his constitutional rights in the courtroom, and had given his case adequate preparation, he would gain much in poise and confidence.

Juries manifest a peculiar psychology, inasmuch as they believe the plaintiff is entitled to some damage award, whether the doctor be judged right or wrong. Their sympathy is seldom with the defendant. This is especially true if the physician is known to be insured. It is not much inducement to initiate legal procedure if the patient is aware of the fact that the doctor has no negotiable property in his own name, and carries no protection. Nor is it a temptation to the lawyer, for he usually accepts this type of work on a percentage basis. There is statistical confirmation that damage suits are more prevalent in industrial localities than in rural or farming communities.

A physician or surgeon is required by law to render only *ordinary* care and skill. If he in any way deviates from this standard he is subject to reprimand or litigation.

Damage actions usually arise from some surgical procedure which the plaintiff and her doctor contend was not properly executed. If a patient succumbs to a disease, either commonplace or obscure, it is the "Will of God"; but if he or she is subjected to surgery, and a 100 percent desirable result is not obtained, the surgeon is held responsible for mutilation or death.

No one should attempt surgical treatment unless he has had extensive training and experience. This would tend, at least, to minimize mistakes, and consequently the number of suits which grow out of them.

Complete and detailed case records are of paramount importance, because they enable the physician to speak with assurance, and to marshal facts in a convincing manner on the witness stand.

On frequent occasions the doctor is sued because the patient was permitted to examine x-ray plates of fracture cases, taken before and after treatment. To the layman's way of thinking, a perfect anatomic result is anticipated, and must be secured, when all that the surgeon hopes for is a good functional result and a firm union.

The performance of autopsies without written consent is another fertile field for lawsuits.

Medicine is progressive, and what may be an accepted principle today will be discarded tomorrow in favor of newer advances. Periodic graduate

training is no longer a luxury, but an absolute necessity. If a physician is to render a maximum of good to his patients, he must keep pace with medical progress.

PAUL E. CRAIG, M.D.

Coffeyville, Kansas.



Four-Hour Golfers

THE average golfer expects to play eighteen holes of golf in three hours, under average conditions. Some enjoy the game best if they can breeze through clear fairways in two hours and a half. Others like to loaf along so as to make the eighteen in four hours. The problem is, how can all these people play on the same course at the same time and all be happy?

The average automobilist expects to drive, under average conditions on country roads, at forty-five miles an hour. Some want to go at seventy on the same roads, while others enjoy the scenery at twenty-five.

We have written laws to govern the situation when these three types of automobilists want to use the same highway at the same time. We also have officers with plenty of authority to enforce these laws.

On the golf course we have only the unwritten law of courtesy, with no officers to enforce it.

When the members of the four-hour foursome ahead of you happen to be good friends of yours, yet persist in holding you up when two fairways ahead are clear, what do you say? When they sit on the bench at the tee talking things over while you play the previous green, then one tees up just as you finish putting, what do you do? I know what you think!

This is just a suggestion that the small minority of four-hour golfers give some thought to the bad habit they have developed and have more consideration for the great three-hour majority.

RALPH R. PATCH.

Boston, Mass.



Funerals

AFTER the age of 50 years, the only funeral a man should attend is his own and, if he has any considerations for his friends, he should arrange to make that a cremation. Emotional reactions are responsible for a considerable increase in the death rate among friends.—*Med. World* (Lond.), April 28, 1939.



I enjoy CLINICAL MEDICINE AND SURGERY the best of any magazine that I receive.—C. L. W., M.D., S. Dak.



MENTAL "PURE FOOD" REGULATIONS

Magazines which persist in misrepresenting the facts to the people, or which confuse and confound the nation, should be padlocked . . . We have pure food laws to protect people against poison being poured into the stomachs of our citizens. How much more important it is to protect the people against poison being poured daily into their minds! — NEWTON JENKINS, in "The Republic Reclaimed."

The Seminar



(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.)

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

Problem No. 12 (Medical)

Presented by R. L. Gorrell, M.D.,
Clarion, Ia.

(See CLIN. MED. AND SURG., Dec., 1938, p. 496)

RECAPITULATION: A man, 60 years of age, who had been troubled by constipation for many years, complained of crampy abdominal pains, nausea, and obstipation. The pains were along the right mid-portion of the abdomen, and persisted, despite change of position, rest in bed, and hot applications. His abdomen was definitely distended, but not tender, and no masses could be felt, abdominally or rectally. His temperature was 100° F.; his pulse, 106; and respirations, 28. The first enema yielded some fecal matter, but no flatus. The second enema returned without flatus. Physical examination was otherwise negative, except that there was a trace of albumin in the urine.

As he refused to be moved to a hospital, he was given several thousand cubic centimeters of physiologic saline solution, intravenously.

His distention persisting, although the pains were relieved, he agreed to take the long ambulance trip. Morphine sulphate $\frac{1}{4}$ grain (16 mg.) was given, hypodermically. Before he had ridden 100 miles across the prairie roads, he began to pass gas, and felt improved.

Requirements: State your tentative diagnosis; the further studies you would make, *giving reasons*; and the treatment.

Discussion by David O. Gorlin, M.D.,
Queens, N. Y.

The history and physical findings in this case certainly point to some form of obstruction in the intestinal tract. The apparent absence of vomiting, together with the distention, are indicative of an obstruction low down, probably in the large gut. It is a known fact that the higher the obstruction, the more vomiting there is and the less the distention.

Inasmuch as the patient was relieved by morphine and by being bounced over the prairie roads, I feel that there must have been intense spasm, possibly a volvulus. However, I would not feel that the case was cured until a complete gastro-intestinal x-ray study disproved the persistence of any organic lesion.

This recalls a similar case I saw in practice. A man, also aged 60, developed classical signs of

intestinal obstruction, refused hospitalization, and in 48 hours cleared up with enemas, atropine, and morphine. He refused further study because he felt well. I again saw him 4 weeks later, when the signs of obstruction again returned. This time I was more successful in persuading him to be hospitalized. A barium enema revealed an obstruction near the rectosigmoid junction, but nothing was noted by proctoscopic study. The abdomen was soft and no masses could be palpated.

A laparotomy was immediately performed and a carcinomatous mass, about the size of an egg, was found at the splenic flexure of the colon. An anastomosis and resection were done, but the man died 3 weeks postoperatively.

Discussion by E. C. Junger, M.D.,
Soldier, La.

This looks like a case of obstruction in the large bowel. A partial hernia, ventral, umbilical, mesenteric, or inguinal, can cause a narrowing of the lumen (a spastic stricture), which is released under morphine. A diverticulum or dilated colon can become impacted, and an infected gallbladder will inhibit peristalsis, causing pain and bloating.

Morphine, with atropine, is indicated for pain. X-Ray study after a bismuth enema may show the type of colon this man has.

The relaxing effect of a trip over rough roads to the hospital once reduced a stubborn strangulated scrotal hernia for me, in a man 74 years old. He began to feel so well after riding 30 miles that he refused operation on reaching the hospital. A recurrence, 90 days later, was not reduced by the trip, and surgery, of an emergency type, cured the hernia—but the patient died after 6 days.

Discussion by G. M. Russell, M.D.,
Billings, Mont.

My diagnosis is probably a *volvulus*, which was released by the jolting of the long ambulance trip, together with the morphine.

Further studies: I would have given him a barium enema, to see if the occlusion could be located with the x-rays, the reason being that there was apparently an obstruction, which one would assume from the lack of the passage of gas.

The ride, in all probability, saved this man from an operation, which would have been indicated had he not been relieved as he was.

Discussion by I. Adelbert Von Chawes, M.D., Union City, Mich.

My tentative diagnosis in this case is *volvulus*. The clinical picture of this form of intestinal obstruction is most common in men between the ages of 40 and 60 years. There is usually a history of chronic constipation; the onset is sudden; symptoms of acute obstruction appear rapidly; nausea is common, but vomiting, if present, is not marked; the temperature may be slightly elevated and the pulse rate accelerated; distention of the abdomen is rapid, associated with dyspnea and tachycardia.

Treatment: All food should be withheld. Administer physiologic saline solution intravenously or subcutaneously. To lessen peristalsis, relax spasm, and relieve pain, administer morphine gr. $\frac{1}{4}$ (16 mg.) with atropine sulphate gr. $\frac{1}{100}$ (0.6 mg.), hypodermically, and apply hot poultices over the abdomen.

For tympanites, hot turpentine stupes are indicated. Four or five doses of liquor pituitarii, given at hourly intervals, is suggestive. Changes in posture, together with mechanical manipulations, often produce surprisingly good results; however, these had best not be attempted without special knowledge of mechanical manipulations.

The majority of cases of intestinal obstruction require surgical operation, if they cannot be remedied satisfactorily by other measures, as outlined above.

Solution by Dr. Gorrell

A blood examination, at the hospital, revealed a high urea concentration (76 mg. per 100 cc.), and there was a markedly decreased urinary output. A thorough roentgenologic examination of the gastro-intestinal tract was negative. Further parenteral administration of fluids restored him to perfect health.

At that time (six years ago) I had never heard of this group of symptoms, and merely labeled it as a pseudo-intestinal obstruction due to uremia.

C. W. Mayo, J. A. Bargen, and E. G. Wakefield, of the Mayo Clinic, have since described several such cases under the name of the "*enterorenal syndrome*." In all their cases, the patients were in the older age groups; signs and symptoms of colonic obstruction were present; and decreased urinary output and increased blood urea concentration were found. The onset of signs and symptoms of obstruction was so sudden that the decision for or against operation was urgent. In fact, one patient was explored, and nothing was found but dilatation of the lower ileum and ascending colon. They suggest that the patient be decompressed medically, with the Wangenstein tube (the new double-lumen Osler-Abbott tube does a more efficient job), and given large amounts of fluids while under observation for a few hours.

Closing Comments by George B. Lake, M.D., Waukegan, Ill.

While it seems quite possible that this case was of the type described by Mayo and Bargen, there is nothing in the history, as presented, to *prove* that this was the case; and it has been my practice, for years, to consider the *commoner* types and causes of disease states *first*, and turn to the rarer

ones only when the more ordinary possibilities had been fully excluded.

The entire picture of this case points, of course, to intestinal obstruction, but it seems to me to be entirely consistent with the diagnosis of *volvulus* or spasm as the cause (mentioned by several of the discussants), or even a temporary kinking of the bowel. If this were the case, the renal disorder might have been wholly coincidental.

Before fully accepting Dr. Gorrell's diagnosis, I should have to follow the suggestion made by several discussants, and have a complete roentgenologic gastro-intestinal study made, or perhaps even two or three such studies, if the first was at all ambiguous. Only after such studies had been pronounced *completely negative* for all pathologic changes, by a thoroughly competent roentgenologist, would I accept Dr. Gorrell's diagnosis unreservedly.

Dr. Gorrell carried out such an examination as he mentioned in his solution, but apparently it was not repeated.



Problem No. 2 (Diagnostic)*

Presented by J. S. Rodman, M.D.,
Philadelphia, Penn.

A. C., a physician of 63 years, was admitted with a chief complaint of pain in the right upper abdominal quadrant, of two weeks' duration. Following a respiratory infection, the patient experienced pain, followed by anorexia, nausea, occasional vomiting, and a slight tint of icterus. Dyspnea was present, which he attributed to a persistent cough.

Examination: His temperature was 98.6° F.; pulse, 116; respirations, 22; blood pressure, 122/80; there was tenderness over right upper quadrant and epigastrium; râles were heard at the lung bases. The heart sounds were distant, and the heart was enlarged 2 cm. to the left of the nipple (midcostal) line, but was regular in rhythm. The Wassermann test, blood count, and urinalysis were performed, without positive results being obtained.

Requirements: What is your diagnosis in this case, and why? What further studies would you have made, and why? Suggest treatment.



Further Discussion of Problem No. 9

SEMINAR Problem No. 9 appeared in the September, 1939, issue of *CLINICAL MEDICINE AND SURGERY*, on page 385, and the discussions of it, particularly an interesting and detailed one by Dr. A. E. McMAHON, of Glenwood City, Wis., began on page 456 of the November issue, my discussion appearing on page 457.

Under date of November 9, I received the following pertinent and thoughtful letter from Dr. McMahon:

"Dear Doctor Lake:

"In your discussion of Problem No. 9 (obstetric) in the November issue of *CLINICAL MEDICINE AND SURGERY*, you emphasize the value of progestin or Lutein in the treatment of premature separation of the placenta. These substan-

*Adapted from *Rev. Gastroent.*, 1939.

ces certainly have a sedative effect on the uterine musculature, and in habitual or threatened abortion are very useful, oftentimes causing a cessation of pain and bleeding and enabling the patient to proceed to term. In the case of a partial premature separation of the placenta, at or near term, our object is, not only to stop the bleeding and pain, but to save the baby as well.

"Assuming that a diagnosis of partial separation of the placenta has been made, the question which troubles me is this: Is it safe or right to temporize? Progesterin will stop the pain of uterine contraction, and without contraction the bleeding will subside, *but will it stop?* What is to prevent continued slow bleeding into the relaxed uterus from that portion of the placental site where detachment has already occurred? And, after the administration of several doses of Lutein or progesterin, if it becomes necessary to perform a cesarean section, how will the uterus react to the ergot alkaloids and pituitrin after being paralyzed by Lutein?

"Please understand, Doctor Lake, that I ask these questions for information, and not by way of criticism. Your reply will be awaited with interest and will be greatly appreciated."

Sincerely yours,

A. E. McMAHON, M.D.

Although I felt reasonably sure of my ground, I realized that my comments upon the use of Lutein in cases of premature separation of the placenta were based chiefly on the findings of Dr. Frederick H. Falls, of Chicago, professor of obstetrics and gynecology, University of Illinois College of Medicine, to whose work I referred in my discussion.

In order to answer Dr. McMahon's questions adequately, and to set my own mind at rest, I sent a copy of the Doctor's letter, along with tear-sheets of the printed Seminar discussions, to Dr. Falls, and asked for his comments. Under date of January 2, 1940, I received the following letter from him:

"I feel that your discussion is essentially correct. Possibly the fact that the patient was seen when nine months pregnant would indicate that immediate cesarean section, without progesterin injections, would be indicated. The necessity, however, for this radical management might be questioned, and I believe that, with a baby in good

condition and the mother showing no signs of shock and only slight bleeding, the sedative management, with careful observation for evidences of fetal distress, would be a safe and sane viewpoint. It should be stressed, in this connection, that the progesterin is particularly valuable when used in pregnancies that have progressed to the borderline of viability of the baby, since, by retaining the fetus in utero, we decrease, automatically, its prematurity.

"Practically all of these patients with partial separation come in with the history of having passed about two or three ounces of blood, and with the bleeding either stopped or practically so at the time they come under observation. Clots have formed between the separated portion of the placenta and the uterine wall and all immediate danger has passed. The danger then confronting us is that the irritation of the clot will produce further uterine contractions which will lead to more separation of the placenta and renewed bleeding. Under these circumstances I have never hesitated to use the progesterin, and in no case has the bleeding failed to stop, and in no case have I seen uterine atony with increased bleeding, as the result of the progesterin. What I have been concerned about is the possibility that hemorrhage might continue. Under such circumstances, one would be forced to empty the uterus and, with a patient loaded with progesterin, might, theoretically at least, have a serious postpartum hemorrhage. I have elected to take this chance in order to get the benefit of the progesterin, and so far have not regretted doing so. I suppose that, as my experience increases, I may have to modify my recommendations, but so far have seen nothing that would lead me to change my present practice."

F. H. FALLS, M.D.

As it seems to me that others among our readers may have asked themselves the same questions that Dr. McMahon put in writing, and that, in view of the relative newness of this work, the answers by Dr. Falls may be of general interest, I am publishing this correspondence, so that all of our readers may have the benefit of the information it contains.

GEORGE B. LAKE, M.D.

Waukegan, Ill.

INCREASED WISDOM

A man should never be ashamed to admit that he has been wrong. It is another way of saying that he is wiser today than he was yesterday.—Let's Go.

CONFISCATION AND SLAVERY

If property, or money, or the proceeds of activity are taken from a man who has saved part of his earnings, without justice and without reason, we shall soon get to a point where all the people, including those who have little, will have less, because prosperity will cease to exist and we shall be driven, or shall drift, into a position of industrial slavery.—ELBERT H. GARY.

AUTHORITY

For what is "authority" upon any question, after all? No more really, than a light streaming upon a certain object through one single, more or less wide, chink, and illuminating it from one side only.—Lucifer.

Clinical Notes and Abstracts



Sulfanilamide in Dental Abscess

(A Case Report)

TWO upper left incisor teeth, in a man, developed small, superficial areas of decay in the spring of 1937. They were filled late in May, by a dentist, but remained sensitive, especially to cold. This subsided without any kind of treatment. The second time this happened some throbbing pain was felt for a day or two.

In the extremely hot weather in July, the patient got some very cold dessert against the teeth, and they again (this being the third time) began to feel uncomfortable. The distress increased in severity, and in a day or two severe throbbing was felt, which continued for several days. After a particularly uncomfortable and more or less sleepless night, the patient found a swelling in the roof of the mouth, behind the teeth, and also in the gum in front of the teeth.

He visited a physician, who, upon examination, found that both swellings had opened and pus was exuding. The doctor expressed as much of the pus as possible, applied tincture of iodine to the abscess openings, and advised the patient to keep applied against the outer pus sac in the buccal gingival membrane, a pledget of cotton wet with a saturated solution of boric acid, which would be held in position by the cheek. This the patient did.

He was given an injection of combined streptococcus-staphylococcus vaccine, and also some sulfanilamide tablets. The doctor presumed that there might be a streptococcus infection along with the staphylococci, so he looked up information on sulfanilamide and read that it was possible to administer 1 gram daily for every 20 pounds of weight. The patient weighed 150 pounds, so he was given 15 grains of sulfanilamide every 3 hours, the first day. The next day he found no more pus coming from the pus sacs, and took about $7\frac{1}{2}$ grains three or four times; and on the third day $7\frac{1}{2}$ grains in the morning only. He noticed that his lips were blue.

I examined him carefully and found that he presented a notable example of cyanosis, with markedly blue lips. He had also been quite dizzy during the time he was taking the sulfanilamide. He took no more of it that day, but did receive another injection of streptococcus-staphylococcus vaccine. I think the dizziness was dependent on anoxemia, produced by the large doses of the drug.

He took no sulfanilamide the next day; but on the following day took 1 grain in the morning and 1 grain at noon, because there was a slight swelling in the roof of the mouth behind the teeth, where it had begun several days before. The swelling disappeared and has not recurred. Another streptococcus-staphylococcus injection was given. The affected areas now seem entirely nor-

mal; the teeth are no longer sensitive to cold; the abscesses have healed and left no trace.

Regarding the doses of sulfanilamide, I advise much smaller doses than those with which I started. I believe that doses of 5 grains, four times a day, will be large enough to cure a purulent focus and it will avoid the anoxemia and dizziness caused by the larger doses, which could be justified only by a severe general infection. However, the dose of the drug might be slightly increased, if results are slow with the smaller dose.

JOHN C. ROMMEL, M.D.

Philadelphia, Pa.

[It is a bit difficult to understand why Dr. Rommel attributes the good result in this case solely to the sulfanilamide, when the patient was also receiving vaccine treatment, which might well have accounted for the improvement, unless he had used vaccines before with unsatisfactory results. If that were the case, one wonders why he used them this time.]

Since it now seems fairly certain that a combination of antipneumococcus serum and sulfapyridine exerts a synergistic effect in pneumonia, it seems quite possible that there may be a synergism between drugs of this class and vaccines.—Ed.]



Tuberculosis Introverts and Extroverts*

EXTROVERSION may be defined as the turning of an interest outward toward some object. Introversion is the contemplation of one's own thoughts and feelings. Tuberculous patients can hardly be rigidly classified into these two groups, but in each individual is the tendency to lean toward one or the other, and when an individual develops tuberculosis that tendency becomes more manifest.

The neurasthenic manifestations encountered in tuberculous patients are not specific, but are frequently seen in individuals with any protracted illness. The physician dealing with tuberculous patients must help them to adjust and adapt themselves to their illness, as close to the point of contentment as is possible, instilling within them the hope and certainty that they will soon recover and return to their former usefulness to society. The patient confined to a regimen of rest in bed for a number of months must be made to believe in the need for such treatment.

The extrovert is characteristically carefree and unconcerned about his condition. The problem

*J.A.M.A., May 27, 1939.

that confronts the physician is to gain the confidence of this patient and to explain the need for prolonged treatment if he is to make satisfactory progress. Occasionally one will encounter a patient who does not adequately appreciate the necessity for intensive treatment. Here one must be frankly outspoken and attempt to show what may happen if he fails to heed the physician's advice. The patient must be made to realize that he is a sick person, in spite of his apparent well-being. He must be convinced of the fact that tuberculosis, when discovered early, may be easily controlled, whereas, when the disease is of a more advanced type, it is more difficult to obtain a satisfactory result. In order to obtain the full cooperation of the patient, it is essential that he be advised, by education, concerning the development and progress of the disease. The physician in charge must make an *indelible impression* on his patient.

With the introvert, we must use the greatest of discretion. He has kept his troubles to himself, for his best defense has been to keep them hidden. This type of individual should be prevailed upon to share his innermost thoughts with the physician. He must not be allowed to become depressed, for a happy patient with a happy, healthy state of mind, is a most desirable asset in fighting a chronic disease such as tuberculosis. On the other hand, the practice of minimizing a patient's lesion, such as diagnosing an infiltrate as "bronchitis," so as to avoid any "embarrassment" to the patient, is to be condemned. Too often patients are seen who state that their physician, several months prior to admission, told them that they had a "little bronchitis" or a "tiny spot on the lung," and advised only a couple of weeks' rest in bed.

However, in a certain few selected cases it may be perfectly justifiable to minimize somewhat the extent of the process. Patients who are apprehensive and worried about themselves must be reassured and convinced that their trouble is not too far advanced and that, with time, they will recover. An attitude of optimism must be assumed by the doctor and inculcated in the patient. The mere mention of the word "cavity" may cause such a patient to become panicky and apprehensive.

When making staff rounds, it is best not to discuss the case before the patient, except in the form of encouragement. The patient will listen intently and will invariably misinterpret every statement. The physician should devote as much time as possible to obtaining a sympathetic understanding with the patient and discuss at length any problem that may be brought up, no matter how trivial it may seem. He should be encouraged to keep interested in the news of the day. The widespread use of the radio is endorsed; its effects on the well-being of the patients have been so encouraging that in the new Hudson County Tuberculosis Hospital, every bed is supplied with an individual ear-set, so that a patient may have the choice of listening to one of four different programs without in any way interfering with the other patients in the ward.

When pneumothorax is attempted and fails, the patient will become despondent, feeling that his only hope for recovery is lost. To obviate this apparent setback, one must explain that pneumothorax is merely an adjunct in the treatment; that the patient will improve with rest in bed alone,

but that, if pneumothorax is successful, it will help to rest the lung a little more and tend to hasten recovery.

One has to contend with patients wanting to be discharged because they feel they can continue rest in bed at home. *This is not true.* The majority of those who sign a release become careless and soon have to return because of reactivation of the lesion. With this group the physician must stress the dangers involved, frankly and outspokenly. Citing as an instance an individual, known to the patient, if practicable, who, having refused advice, has had to return with an advanced lesion, often helps him to comprehend the significance of his intentions.

One thing must be emphasized to all tuberculous patients, that rest means, not only *physical* rest, but also *mental* rest. The object of physical rest is to diminish the work of the lungs by diminishing the number and extent of the respiratory excursions. Yet, what good is such physical rest if the patient maintains a state of high nervous tension, as seen in the neurasthenic type of individual? It is not infrequently noted that patients with extensive pulmonary involvement, who are cheerful and mentally stable, show favorable progress.

ALFRED L. KRUGER, M.D.

Jersey City, N. J.

[Imagine if you can, how far a physician would get with a program like this under a system of regimented and politicalized State Medicine! Tell your patients what sort of treatment they would get under such a system, and see if they like it. If not, advise them to write their congressmen to kill the *Wagner Health Bill* (see *CLIN. MED. & SURG.*, June, 1939, page 253) and all similar measures which may be introduced.—Ed.]



Look for THE LEISURE HOUR among the advertising pages at the back.



The Use of Silk in General Surgery

THE errors to be avoided in the use of silk in surgery are: (1) Tight sutures; (2) mass ligatures; (3) blunt scissors dissection; (4) careless hemostasis; (5) use of any but the finest grade of silk; (6) combination of silk and catgut; (7) use of silk in any but a sterile field; and (8) continuous sutures.

Whipple has stated that the surgeon's percentage of clean wound healing is not only a measure of his asepsis, but is an index of his entire surgical philosophy.

Silk technic offers many advantages: (1) Knots are tied with greater ease and, when tied, give a feeling of greater security than when tied with catgut; (2) the suture material may be rendered absolutely sterile by boiling; (3) it is inexpensive; (4) wounds heal with a minimum of tissue reaction, serum pockets seldom result, and per primam healing is the rule; and (5) infections occur less often with silk than in catgut-sutured wounds, and postoperative wound disruption is a rare occurrence.—DONALD GUTHRIE, M.D., in *Pennsylvania M. J.*, July, 1939.

"Growing Pains" and Rheumatic Pains
Differential Diagnosis

Diagnostic Factors	Non-rheumatic "Growing Pains"	Joint Pains of Subacute Rheumatic Fever.
Age at onset	Early childhood; often continues through adolescence.	Most commonly between 6 and 7 years; often in attacks following respiratory infections or infectious diseases.
Time of pain	At end of day, especially during night, often awakening child. Pain gone in morning.	On first getting out of bed, during day, especially on motion; often with limp. Feels better on getting warm in bed.
Location	Muscles of legs and thighs.	In joints themselves, or upper and lower extremities.
Rheumatic signs	None	Repeated joint pains; nose bleeds; pallor; mild fever.
Objective signs	None	Joints often slightly warm and swollen.
Family History	Uncommon	Family history of rheumatic fever common.
Laboratory Tests	Normal sedimentation rate, leukocyte count, and hemoglobin.	Increased sedimentation rate; mild leukocytosis; moderately decreased hemoglobin.

—M. J. SHAPIRO, M.D., in an address to Graduate Students in Medicine, University of Minnesota.

Surgery in Old Age*

CLOSE-FITTING plaster of Paris casts are poorly tolerated by old persons. Adequate padding is essential, with special attention to bony points such as the malleoli.

Really *hot* applications are not well tolerated by the aged person and should not be used in the treatment of inflammation. Early cardiac stimulation by drugs and alcohol is essential, because the toxemia of infection has a more marked effect on the cardiac muscle.

Appendicitis: A large number of cases present the features of an intestinal obstruction of slow onset, with pain at first and with persistent pyrexia—the latter point may be a help in eliciting the true cause. The pain is rarely the true right iliac fossa pain of appendicitis, but is described as "acute indigestion," and is commonly referred mainly to the epigastrium. Physical signs are indefinite; the abdomen shows general distension, not frequently with visible peristalsis; tenderness is general and often more marked in the hypogastrium and center of the abdomen, presumably from small-gut distension. At operation, there is little peritoneal exudate, the intestines are sticky and red, and there is rarely any shutting off of the infected appendix by adhesions. These patients usually stand operation well.

The *other type of appendicitis* in the aged: An "acute attack of indigestion" is followed by ill health of an indefinite nature, inability to take food, disorder of the bowels (constipation or, occasion-

ally, diarrhea), and persistent slight pyrexia. Abdominal examination, at first, gives indefinite results, but eventually a hard, tender mass develops in the right iliac fossa, denoting the slow formation of an appendiceal abscess.

In old persons, the liver tends to descend, and on two occasions, when operating for what I thought was an appendiceal abscess, I have found an empyema of the gallbladder, low down in the right iliac fossa.

Carcinoma in old persons is usually a slowly progressing disease, with much less marked tendency to dissemination. Therefore much less radical procedures need to be taken, such as local removal of the breast and short-circuiting of irremovable or difficult removable colonic carcinomas.

Rectal pruritus may be relieved by a soap containing 10 percent of ichthyol, for cleansing purposes, and a local application of *lotio plumbi subacetatis*, with half a dram of *liquor carbonis detergens* in ten ounces.

Prolapse of the rectal mucosa may be treated by submucous injections, as used in hemorrhoidal treatment; but if the condition is not relieved by this means, excision of the redundant mucous membrane is well tolerated and usually effective. *Prolapsing piles* can be kept in control if the patient is instructed to see that his bowels act at night, before retiring, and subsequently a pad, liberally soaked in *lotio calaminæ* containing four times the usual amount of calamine is applied. Radical operations for hemorrhoids are to be avoided in old people, owing to poor healing

*Proc. Royal Soc. Med., Sept., 1939

power. Treatment by injection is sometimes of value, but must be used with great care.

Cystitis and pyelitis present great difficulty in treatment, as they often are associated with obstruction to the urinary outflow due to an enlarged prostate, or with stagnation in the bladder from a cystocele, and these conditions must be treated first.

Hernia: Femoral hernias in the aged respond well, but umbilical and inguinal hernias are difficult to cure.

CLAUDE FRANKAU, M.S.

London, England.

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Late Recurrence of Cancer of the Breast

THERE is one disappointing fact in connection with the end results of operative surgery for breast cancer: the disease may recur, even many years after, at a time when the original malady has been almost forgotten. These late recurrences are also encountered in malignant disease of other organs of the body. It seems strange that cancer of the breast may recur as long as 31 years after the original operation. Three cases of recurrence in the scar have been observed by me, 21, 22, and 23 years after operation by other surgeons. Certain patients seem to have a cancer "diathesis," and subsequently, or at the same time, develop cancers of other organs.—Cancer Number of *The Practitioner*, July, 1939.

[Possibly the gradually growing idea, that cancer is a generalized disease, may displace the currently accepted notion that cancer is a local pathologic condition. The implications, as far as early diagnosis is concerned, are obvious.—Ed.]

Prolapse of the Rectal Mucosa*

THE mucosa of the rectum, normally rather loosely attached to the muscular layer, may become still more redundant and prolapse through the anal canal. This is the most common type of prolapse and is usually seen in young children or elderly people. Not infrequently, when examining an adult, one hesitates in deciding whether to describe the situation as "mucous membrane prolapse" or "prolapsed internal hemorrhoids."

A mucous membrane prolapse is more common in old age, because of its association with some degree of sphincter relaxation. The protruding mucosa is a bright cherry-red in color, and usually involves at least one half, if not the entire, anal circumference. Its surface is smooth, does not exhibit the circular corrugations characteristic of a prolapse of the entire bowel wall, and it rarely protrudes from the anus more than an inch. Prolapsed internal hemorrhoids, by contrast, are more common in early adult and middle life; are darker in color, because of their varicosities; and occupy more localized sections of the circumference. If

the prolapse is annular, it appears to be divided into halves by an anterior and posterior furrow extending radially from the anus. In the early stage, the prolapsed mucosa retracts spontaneously, but as time goes on and the sphincter becomes more relaxed, the mucosa may remain outside the anus most of the time.

Symptoms: Moisture and resulting discomfort are the leading symptoms. Bleeding occurs only when the mucosa is abraded by attempts to clean the area or to reduce the obstruction.

Treatment: A slight mucous membrane prolapse may be handled by the injection of 5-percent quinine and urea hydrochloride solution or 5-percent phenol in almond oil, beneath the mucosa about 2 cm. above the muco-cutaneous junction, after the prolapse has been reduced. The solution is gently massaged with the index finger, to spread it evenly beneath the upper part of the prolapse. Several points are selected for the insertion of the needle, and a total amount of 5 cc. of either solution may be used. This treatment, much like that for internal hemorrhoids, should be repeated at several weekly intervals, even though the first injection may stop the protrusion.

The prolapsed mucosa may be excised, under local anesthesia, if it is more extensive.

E. PARKER HAYDEN, M.D., F.A.C.S.

Boston, Mass.

Ovulation Time and Sterility

THERE is now no doubt that most ovulations occur in the middle of the menstrual cycle, but the exact determination of ovulation time is as gravely important for sterile women who desperately desire babies, as it is for certain other women who desperately seek to limit their already-too-great burdens of procreation.

Sterility due to limited potency on the part of the husbands has a good theoretical prospect of being corrected by adoption of the Mosaic rule of abstinence for seven days following the end of menstruation, so as to attain the greatest potency at the optimum ovulation time—the middle of the cycle. Albrecht reports 26 immediate impregnations by this method among 65 patients that had been sterile for from two to six years.—CARL G. HARTMAN, M.D., in "Time of Ovulation in Women" (Williams and Wilkins Company).

Gastritis

SOME ten years ago, continental surgeons who were performing many gastric resections for ulcer found that the great majority of the resected specimens showed pathologic evidence of chronic gastritis. Surgeons in this country, although they were performing few resections for benign lesions, disputed this view very warmly (it has been said that the heat of an argument is in inverse ratio to the amount of knowledge) and claimed that European ulcers and stomachs were different and that gastritis was uncommon.

Within the past four years, however, Schindler and other gastroscopists have directly observed various types of gastritis, and pathologists have compelled the surgeons to admit that this condition is frequently associated with peptic ulcer.

*"The Rectum and Colon"; Lea & Febiger, Publishers.

Those whose experience is greatest believe, with von Bergmann, that "a stomach without microscopic gastritic foci or evidence of healed gastritis is a great rarity among adults."

Ihre's recent monograph on "Human Gastric Secretion" (Oxford University Press, 1939) states, "The decreased acidity is a measure of the intensity of gastritic alterations and corresponds to the severity of the endoscopically-observed lesions, as far as such a statement can be made. In older individuals, it is uncommon to find the same acidity as in early, healthy youth . . . Hyposecretion is the most characteristic feature of chronic gastritis."

Our knowledge of gastritis has not yet progressed far enough so that specific treatment is available. Hydrochloric acid is of value in relieving hypochlorhydria and its attendant symptoms, and in preventing the ascent of bacteria from the lower intestinal tract (Lloyd Arnold). Vitamin B therapy may stimulate gastro-intestinal function, including motor power and secretion. The red blood-cell count and hemoglobin should be brought up to normal by liver or iron therapy, as gastric secretion is definitely diminished in anemia.

R. L. GORRELL, M.D.

Clarion, Ia.

External Diseases of the Anus*

EXTERNAL examination of the anus should be made with the patient in the lateral, semi-prone position, the examiner seated on a stool which is not too high, and the nurse standing behind the patient so that she can easily draw upward, with one or both hands, the patient's upper buttock, and thereby facilitate an exposure of the perianal region. If a nurse is not present, the retraction can be accomplished by the patient, using his left hand.

The ease of exposure varies with the degree of fatness of the buttocks and the ability of the patient to relax his gluteal and perineal muscles and to "strain down" when asked to do so. Certain patients are able to protrude the anus to such an extent that the sphincter can actually be seen and palpated as a protruding ring under the perianal skin. It may be necessary to clip the perianal hair before it is possible to really see the underlying skin.

Inspection: By slow, careful inspection of the skin within a radius of 3 or 4 inches from the anal outlet, these conditions may be found: (1) *Skin tags* or tabs, close to the anus, usually wrinkled, flaccid, not inflamed, the color of normal skin and varying in number and size; (2) one or more *edematous skin tags*, smooth, almost translucent, their wrinkles all obliterated, and diagnostic of either venous thrombosis or infection beneath them or within the anal canal; (3) the "*sentinel pile*", which is an edematous, rounded, sessile skin tab, usually located in the posterior midline just at the anal outlet, and indicating the presence of an anal fissure directly above and in line with it. The lower end of the fissure, which often undermines this tab, can usually be seen by retracting the buttocks and asking the patient to "strain down"; (4) *external hemorrhoidal veins*, forming a ring beneath the perianal skin, increased in size by straining, showing bluish through the skin, and symptomless for the most part, unless (5) *thrombosis* occurs,

in segments tense, bluish, skin-covered, tender, smooth, round or oval tumors at the anal outlet, either well outside of, or often within the grip of the external sphincter. Skin tags previously present, or normal skin, may become quite edematous as a result of the thrombosis; (6) *protruded internal hemorrhoids*, soft, reddish to bluish in color according to the degree of congestion, moist, mucous-membrane covered, usually localized, protrusions from within the anal canal; (7) *thrombosed protruded internal hemorrhoids*, the above situation plus the firmness of thrombosis and often with ulceration and gangrene — dark, ugly-appearing tumors, easily diagnosed by contrast with the skin adjacent, which is usually edematous due to underlying external thromboses; (8) *erolapsed mucosa*, cherry-red, wrinkled, moist and usually free from inflammation, segmented as a rule, but may involve the entire circumference; (9) *acute dermatitis*, the uniform redness of an intertrigo suggestive of chafing, in association with a purulent discharge, either vaginal or rectal; (10) *pruritus ani*, pale, soggy, whitish, excoriated, corrugated perianal skin, often with a superficial excoriation extending along the intergluteal fold posteriorly; (11) *external fistulous openings*, usually easily evident but occasionally so small as to be almost invisible among the radiating folds of skin; (12) a small, localized, *area of convexity* close to the anus, where normally the skin should be flat or even slightly concave—a very small perianal abscess, based on a blind internal fistula and partially draining internally, may thus be suspected even before digital examination is carried out; (13) *perianal condylomas*, typically wart-like appearance, usually reddish and moist, with associated intertrigo, varying in size from small, flat warts to large papillomas resembling a cock's comb; (14) *sebaceous cysts*, quite common, usually multiple; and (15) *pilonidal sinuses or dimples*, always in the midline over the coccyx unless a previous abscess has produced a sinus laterally in one buttock or the other.

E. P. HAYDEN, M.D.

Boston, Mass.

Sulfamethylthiazol in Infections

SULFAPYRIDINE has been useful in the treatment of staphylococcal infections (severe abscess, cellulitis, pneumonia, septicemia of staphylococcal etiology), but causes many toxic manifestations, including nausea and vomiting.

A new compound, which contains a radical of sulfanilamide and a thiazol radical, named "Sulfamethylthiazol," seems to possess, in vitro as well as in vivo, action against experimental streptococcal, pneumococcal, and staphylococcal infections similar to that of sulfapyridine and sulfanilamide. Sulfamethylthiazol is the most effective drug of the three against staphylococci (although the other two do exert a bacteriostatic action on *S. aureus*). A case of staphylococcal septicemia responded brilliantly to sulfamethylthiazol.—W. E. HERRELL, M. D., and A. E. BROWN, M. D., in *Proc. Staff Meet. Mayo Clinic*, Nov. 29, 1939.

I am always glad to receive my copies of "C.M. & S." There is always "good pickings" in it and interesting articles.—D. J., Canada.

*"The Rectum and Colon"; Lea & Febiger, Publishers.

Diagnostic Pointers



Pain in the Chest

● Pain in the chest, behind the lower two-thirds of the sternum, may be referred from a peptic ulcer, a chronic gallbladder infection, or a "grumbling" chronic appendix. Pain in the "heart" (the left breast or left thorax) is frequent in chronic cholecystitis, although this symptom does not appear to be widely known.—HAROLD DODD, F.R.C.S., in *The Practitioner*, Dec., 1938.

Headache and Brain Tumor

● A patient with brain tumor usually complains of headache which has persisted for a varying period of time; is persistent; is increased by mechanisms which increase intracranial pressure, such as coughing or straining; and is unrelieved by salicylates or other drugs. The location of the headache is of no diagnostic importance.

Vomiting and loss of visual acuity may also be present. There is a history of rapid or gradual progression of symptoms, which is most important for the diagnosis of brain tumor. Gradual deterioration of the mental faculties; loss of power on one side or part of one side of the body; speech difficulties; jacksonian convulsions, either motor or sensory; and visual-field disturbances should lead to a suspicion of brain tumor.—BERNARD ALPERS, M.D., in *Pennsylvania M. J.*, July, 1939.

Varicocele and Renal Cancer

● A varicocele due to extension of a renal tumor into the renal vein or inferior vena cava *does not disappear when the patient lies down, and is pathognomonic if it occurs on the right side.*—Cancer Number of *The Practitioner*, July, 1939.

Cancer of the Penis

● Phimosis, in older men, should be treated by circumcision, as cancer of the penis occurs always in men with a long foreskin. Owing to the presence of normal smegma secretion, the inability to retract the prepuce leads to balanitis and, in course of time, to a malignant condition. The first symptom is a *painless*, blood-stained discharge, emerging from under the prepuce, together with a localized swelling.—Cancer Number of *The Practitioner*, July, 1939.

X-Ray Diagnosis of Placenta Previa

● By means of soft-tissue roentgenologic technic, the placenta and uterine wall may be readily visualized in pregnant women. Placenta previa may be diagnosed or ruled out without a vaginal examination.—A. LEUIS DIPPEL, M.D., in *Scientific Exhibit*, A. M. A., May 19, 1939.

Hypothyroidism

● Abdominal distention is one of the most frequent causes of shortness of breath and choking sensations complained of by the hypothyroid patient. The pulse rate of the patient is usually slow, ranging between 68 and 60, or less. A rapid pulse rate is not rare in hypothyroidism, expressing either overcompensation by the sympathetic nervous system or the effect of other factors (gastric, intestinal, nervous) upon the heart. Thus *bradycardia or tachycardia* may be symptoms of hypothyroidism, as shown convincingly by the therapeutic test with appropriate thyroid medication, which readjusts the pulse rate to normal in both types.—MAX GOLDZIEHER, M.D., in "The Endocrine Glands" (D. Appleton-Century Company, Publishers).

Severe Gastric Cancer

● Most treacherous of all gastric cancers is that which manifests itself by anorexia, undue fatigability, dizziness, and palpitation, without obvious loss of weight, and without digestive symptoms.—Cancer Number of *The Practitioner*, July, 1939.

Tuberculin Tests

● The x-ray examination is inferior to the carefully performed tuberculin test in detecting infection with tubercle bacilli, as primary lesions may be too small for x-ray visualization, or may be situated unfavorably for it, or are located elsewhere than in the lungs.—J. A. MYERS, M.D., in *Am. J. Dis. Child.*, July, 1939.

The Basal Metabolic Rate in Tuberculosis

● The basal metabolic rate is a diagnostic criterion of activity or inactivity of a *primary* tuberculous lesion of the lungs in children. When the process becomes inactive, the sedimentation rate and basal metabolic rate return to normal. In the adult type of tuberculosis, the basal metabolic rate remains normal despite extensive pulmonary involvement.—ANNE TOPPER, M.D., in *Am. J. Dis. Child.*, July, 1939.

Weakness of the Legs

● The lateral and posterior columns of the spinal cord are often affected early in the course of *pernicious anemia*, causing motor weakness, loss of deep sensation (position and vibration, but not of pain and temperature), ataxia, and sphincter disturbances. *The neurologic disabilities may antedate other marked evidences of pernicious anemia by months or years.* Confirmation is afforded by blood studies, gastric analysis, and a negative Wassermann test.—J. C. YASKIN, M.D., in *Pennsylvania M. J.*, July, 1939.

Thumbnail Therapeutics



The Conservative Treatment for Appendiceal Peritonitis

● The conservative (Ochsner) treatment of appendiceal peritonitis is not a *substitute* for operation, but a *preparation* for it. It is not to be undertaken in the home or by the family doctor, but in a hospital, "on the threshold of the operating room," under the constant eye of the surgeon who is to operate at any hour, if necessary. If the surgeon is not so situated that he can visit his patients personally at least three times daily, and be prepared to respond at any hour if called, the delayed form of treatment should not be undertaken. This treatment (no fluids by mouth, Fowler's position, gastric lavage) is never used for *unruptured*, inflamed appendices.—C. E. GARDNER, JR., M.D., in *South. M. J.*, Feb., 1939.

Iron During Pregnancy

● The administration of iron has been advocated as a prophylactic measure in pregnancy. In view of the requirements of the fetus for iron and the possibility of dietary idiosyncrasies during pregnancy, this procedure can be recommended. It has been shown that anemia is more likely to develop in infants born of anemic mothers. Consequently, iron therapy—ferrous sulphate, in 12- to 18-grain (0.8- to 1.2-Gm.) total daily doses—works to the advantage of the mother and the child.—M. M. WINTROBE, M.D., in *Internat. Clinics*, June, 1939.

Five-Day Treatment of Malaria

● The immediate effect of from 10 to 20 grains (0.65 to 1.3 Gm.) of quinine, daily, for five days, against malarial fever, appears to be as good as that of larger doses. Relapses within a year vary from 25 to 45 percent. These figures are but little above the relapse rate found when quinine has been taken (10 grains daily) for eight weeks after the fever has subsided. Where patient cooperation is poor, the five-day treatment, repeated if relapse occurs, is probably the most practical.—J. P. SANDERS, M.D., in *South. M. J.*, July, 1939.

Alkaline Douches in Sterility

● Numerous cases of primary sterility may be relieved by the use of 2.4-percent sodium bicarbonate solution, as a douche, 15 minutes before coitus. Occasionally, the douche seems a hindrance to sperm activity, and should not be used without the proof obtained by the Huhner test after a normal intercourse, and again after a douche-preceded coitus.—J. M. SINGLETON, M.D., in *Am. J. Obst. & Gynec.*, May, 1939.

Bromides Transmitted Through Breast Milk

● Bromides were administered to nursing mothers and specimens of the breast milk taken for analysis. Of 38 specimens, 37 contained bromide. Clinical evidence of transmission was manifested in the child to a marked extent in 4 cases, although in every case there was a marked diminution in the irritability of the child, as well as of the mother. Barbiturates were not well transmitted in this way.—R. M. TYSON, M.D., in *J. Pediat.*, July, 1938.

Calcium in Allergy

● Urticarial conditions, angioneurotic edema, and hay-fever may respond well to the administration of 10 cc. of 10-percent solution of calcium gluconate, given intravenously, followed by 10 cc. of a 10-percent solution intramuscularly. Serum-sickness rash is especially benefited by such injections, but the joint pains are little affected.—NOAH MORSE, M.D., in *The Practitioner*, Sept., 1939.

Prevention of Scarring Following Smallpox

● Suppuration of the smallpox eruption, and consequent scarring, can be avoided by keeping the patient in a room which has been darkened. The same clinical results may be obtained by covering the windows with red cellophane or filter paper. By thus excluding chemically active light, which aggravates inflammatory processes because of the formation of histamine (which, in itself, produces inflammation), the exanthem receives no external irritation. There is no experimental or carefully controlled clinical evidence that red light itself is beneficial to skin lesions.—HERMANN VOLLMER, M.D., in *Arch. Phys. Therapy*, April, 1938.

Peritonitis with Nephrosis

● When a child with nephrosis becomes critically ill with vomiting, preceded by a few loose stools and followed by high fever, leukocytosis, rapid pulse, and generalized tenderness, rigidity, and pain over the abdomen, the picture is alarming to anyone experienced in dealing with nephrosis. Marked improvement follows the intramuscular or intravenous injection of either erysipelas or scarlet fever convalescent serum, in amounts of from 40 to 100 cc. As these serums seem to be effective regardless of the type of organism (pneumococci or streptococci), any type of serum, or a transfusion, may be as valuable.—C. A. ALDRICH, M.D., in *Am. J. Dis. Child.*, Mar., 1939.



THE DOCTOR'S STUDY

*Words are things, and a small drop of ink, falling like dew upon a thought,
produces that which makes thousands, perhaps millions, think—*
BYRON.

Proctology

Smith

PROCTOLOGY FOR THE GENERAL PRACTITIONER. By FREDERICK C. SMITH, M.D., M.Sc. (Med.), F.A.F.S., Proctologist to St. Luke's and Children's Hospital, Philadelphia; Formerly, Associate in Proctology, Graduate School of Medicine, University of Pennsylvania. 142 Illustrations. Philadelphia: F. A. Davis Company. 1939. Price, \$4.50.

FOR the general practitioner and surgeon who wish to have the common and important rectal conditions simply described, this book may well be recommended. Treatment is stressed and surgical or injection technic completely described.

Every word contains practical advice on diagnosis and treatment of the diseases that the general physician can properly manage. Consideration for the patient's comfort is reflected in little hints, such as: "It is quite important, from the standpoint of the patient's comfort, that the area to be operated upon be not shaved. Where shaving is done, the patient will be very uncomfortable from itching when the short hairs begin to grow out"; "Various operations have been put forward as painless hemorrhoidectomies. After talking to patients who have had all types of operations, one doubts all these claims. The surgeons who say otherwise are not untruthful; they merely were not present during the painful period."

The author advocates the injection of from 1 to 2 cc. of quinine and urea hydrochloride directly into the hemorrhoid, or from 5 to 10 minims of a phenol preparation into several hemorrhoids, at one sitting, after first withdrawing the plunger to make sure that a blood vessel has not been entered.

The first chapter, and rightly so in a treatise on practical proctology, concerns Anorectal Symptomatology. Bleeding, pain, protrusion, discharge, constipation, diarrhea, and itching are fully considered as to differential diagnosis. This section alone is worth the price of the book, as the busy physician can refer in a minute to the causes of a rectal sign or symptom and have his memory refreshed as to possible causes. For example, it is easy to forget that diarrhea may be caused by impacted feces, yet the diagnosis can be made only by rectal examination.

The discussion on rectal, anal, and perineal sensory symptoms of urogenital origin is especially interesting in regard to the cause and cure of those puzzling symptoms that appear there.

Anatomy, embryology, and malformations of the anus and rectum are well considered. Examination and diagnosis comprise another chapter. The perfect proctology text would have reproductions

in colors or sharp half-tones of all the various abnormalities around the anus and those viewed through the anoscope and sigmoidoscope. The illustrations in this text are good, but are not all-inclusive. If the second edition could be thus furnished, it would take its place as a foremost book in its field.



Psychobiology and Psychiatry

Muncie

PSYCHOBIOLOGY AND PSYCHIATRY. A Textbook of Normal and Abnormal Human Behavior. By WENDELL MUNCIE, M.D., Associate Professor of Psychiatry, Johns Hopkins University; Assistant Psychiatrist, Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital. With a Foreword by ADOLF MEYER, M.D., LL.D., Sc.D., Henry Phipps Professor of Psychiatry and Director of the Department of Psychiatry, Johns Hopkins University. 69 Illustrations. St. Louis: The C. V. Mosby Company. 1939. Price, \$8.00.

IT is good to have a book on abnormal mental conditions that can not only be understood but enjoyed by the average physician, who has always had a latent suspicion that the psychiatrist covered simple diagnosis and treatment with impressively obscure terms.

The author makes no attempt to set forth the outdated, stiff, and cumbersome classification of psychiatric diseases that has hampered the study and care of human beings. He gives actual case histories and then comments upon the important points, both from the etiologic and symptomatic standpoints. The practitioner will be especially interested in his accounts of patients with neuroses, neurasthenia, and anxiety states, and will note that many of the measures that the wise physician uses in practice (making the patient "see" himself as the cause of symptoms, rather than explaining them on a physical basis; letting the patient talk of his troubles and unburden himself) are used at the Phipps Psychiatric Clinic. Emphasis is laid upon a mental review of situations related to the patient, and as little medicine as possible is given, so that the patient will not feel dependent upon sedatives or other drugs.

Full details of examination methods and immediate findings are given. For those who are interested in learning more of the various means of estimating personality, the first portion of the book is given over to consideration of and comment upon the various factors (sex, action tendencies, family influence, etc.) and their measurement.

For those who accuse Adolf Meyer of breaking up the readily grasped but rigid scheme of classifying mental illnesses, the author makes the apt

rebuttal that the clearness apparently brought to the field by the Kraepelin grouping was, in reality, obtained by ignoring facts and that patients do not fit the neat little pigeonholes of dementia precox, manic-depressive psychosis, and other terms.

For the physician who wishes to find what modern psychiatry can do for his patients and who wishes to aid the 80 percent of his patients whose physical illness is complicated by mental factors, this book is warmly recommended.

Diseases of the Biliary Tract

Carter, Greene, and Twiss

DIAGNOSIS AND MANAGEMENT OF DISEASES OF THE BILIARY TRACT. By R. FRANKLIN CARTER, M.D., F.A.C.S., Associate Clinical Professor of Surgery, New York Post-Graduate Medical School, Columbia University; Director of Surgery, Gouverneur Hospital, New York City; CARL H. GREENE, Ph.D., M.D., F.A.C.P., Associate Clinical Professor of Medicine, New York Post-Graduate Medical School, Columbia University; and JOHN RUSSELL TWISS, M.D., F.A.C.P., Assistant Clinical Professor of Medicine, New York Post-Graduate Medical School, Columbia University; Assistant Physician, Out-patient Department, New York Hospital, New York City. 432 Pages; 84 Engravings. Philadelphia: Lea & Febiger. 1939. Price, \$6.50.

THE rare avis, a completely honest and frankly straightforward medical book, is a joy to the man in practice. This book, the product of collaboration between physicians and surgeons, is not merely an ethical advertisement of the diagnostic skill of the internists or the operative skill of the surgeons.

Each case that was treated by the gallbladder clinic was carefully studied, clinically and roentgenographically. Analyses were made of duodenal contents at intervals, and of the gallbladder contents after cholecystectomy. From these cases, sound conclusions are drawn. Surgery is not indicated in patients suffering from dysfunction of the sphincter (biliary dyskinesia), because careful study of these patients postoperatively, over long periods of time, reveals that their courses are the same whether cholecystectomy is carried out or not.

The joint efforts of physician, surgeon, roentgenologist, biochemist, and bacteriologist have never been put to better effect. Each type of biliary dysfunction is considered and medical and surgical indications fully discussed. The physician who has not had time to study all the recent literature on gallbladder diseases will find that the first section of the book, on physiology, biliary stasis, pain in disease of the biliary tract, jaundice, and diagnostic investigation of the patient, presents the worthwhile advances. The technic of roentgenography is also given.

Anatomy and Physiology

Jung, Benjamin and Earle

ANATOMY AND PHYSIOLOGY. By FREDERIC T. JUNG, B.S., Ph.D., M.D., Assistant Professor of Physiology and Pharmacology, Northwestern University Medical School; Member of Visiting Staff, Norwegian American Hospital, Chicago; ANNA RUTH BENJAMIN, M.D., Resident Physician, Elgin State Hospital, Elgin, Illinois; ELIZABETH C. EARLE, B.A., R.N., Educational Director, School of Nursing, St. Elizabeth's Hospital, U.S. Department of Interior, Washington, D.C. 342 Illustrations. Philadelphia: F. A. Davis Company, Publishers. 1939. Price, \$3.50.

THE best review of this beautifully printed and bound book could be obtained by excerpting remarks made by nurses who have read it. The graduates are envious that they did not have the opportunity of using such a fascinating text and feel sure that they could have learned much more readily by study of the excellent illustrations which are spread profusely throughout the book and the streamlined text, which has been shorn of all historic and antiquated material, usually handed down from one text to another.

No single section of the book can be singled out for special praise, although the practicality of much of the material must be commended. The nurse who conscientiously studies this text will

find that she knows much more of the groundwork of the body and its function than the average nurse.

The authors apparently believe that the nurse is entitled to full, adult knowledge, and consequently do not fail to give complete information as to the male reproductive system and its functioning, in a straightforward, pleasing way, which contrasts favorably with the old-maidish manner of handling this subject in many similar texts.

Each system of the body is taken up separately and correlating notes are given so that the various organs do not seem to be disjointed parts. Practical applications are furnished throughout the various chapters, so that the student retains his interest and can more easily remember the material.

The black-and-white, and colored, illustrations are notable for their clarity and teaching value. Most of them are original drawings by Miss Cassell, of the Northwestern Medical School. How Davis manages to include them all (342), and 637 pages of text, for less than four dollars, is a mystery, but a pleasant one.

Pulmonary Tuberculosis

Kayne, Pagel, and O'Shaughnessy

PULMONARY TUBERCULOSIS. Pathology, Diagnosis, Management, Prevention. By GEORGE GREGORY KAYNE, M.D., M.R.C.P., D.P.H., Tuberculosis Medical Officer, Middlesex County Council, etc.; WALTER PAGEL, M.D., Pathologist, Papworth Village Settlement; and LAURENCE O'SHAUGHNESSY, M.D., F.R.C.S., Hunterian Professor in the Royal College of Surgeons of England, 1923 and 1935, etc. London, New York, and Toronto: Oxford University Press. 1939. Price, \$13.00.

IN one handsome volume, the three phases of tuberculosis are presented in the full light of modern research. The clinician will appreciate the numerous roentgenograms and line sketches illustrating salient points in the spread of tuberculosis to various localities and organs, and similar definitive evidence concerning individual cases.

Diagnosis and differential diagnosis are fully considered, both from the roentgenologic and clinical standpoints. The chapter on prognosis—a matter of tremendous importance to the patient and relatives—is extensive and considers the prognosis at the time the diagnosis is first made, during the course of treatment, and after completion of treatment. In each instance, factors which must be analyzed to enable an accurate prognosis to be made, are listed and discussed.

O'Shaughnessy, undoubtedly one of the world's leading thoracic surgeons, contributes the material on surgical treatment of tuberculosis. No attempt is made to give step-by-step operative technic, but rather to indicate which procedure should be chosen for each type of tuberculous involvement.

Because of the high quality of the illustrations, the perfect reproduction on smooth, non-shiny paper, and the marked legibility of the large type, the book may be read with enjoyment and without eye strain.

Tomographic roentgenograms are provided, to indicate how cavities on the x-ray film, which appear as shadows on the ordinary roentgenogram, may be visualized.

Microbiology and Pathology

Carter

MICROBIOLOGY AND PATHOLOGY. By CHARLES F. CARTER, B.S., M.D., Director, Carter's Clinical Laboratory, Dallas, Texas; Consulting Pathologist, St. Louis Southwestern Railway Hospital, Texarkana, Arkansas; Consulting Pathologist, Mother Frances Hospital, Tyler, Texas; Formerly, Director of Laboratories and Lecturer in Bacteriology and Pathology, Parkland Hospital, Dallas, Texas. 165 Illustrations; 25 Color Plates. Second Edition. St. Louis: C. V. Mosby Company. 1939. Price, \$3.25.

THE author has packed a tremendous number of facts into one volume and gives an excellent review of two basic-science subjects, without overlapping or unnecessary repetition. He makes two

"dry" subjects interesting by the use of many good photographs and sketches, including some superb color plates.

The nurse will do well to keep this book at hand, as it offers information for reference, on many topics—practical disinfection and sterilization, including operating-room technic; disinfection of hospital rooms and homes; the importance and details of water- and milk-borne infections; various methods of studying bacteria, as well as the separate bacteria and the diseases caused by them; and much worthwhile information on general and special pathology.

Nitrous Oxide-Oxygen Anesthesia

Clement

NITROUS OXIDE-OXYGEN ANESTHESIA. McKesson-Clement Viewpoint and Technic. By F. W. CLEMENT, M.D., *Director of Anesthesia at Flower Hospital, The State Hospital for the Insane, Lucas County Hospital, Toledo Dental Dispensary; Anesthetist to Toledo, Mercy, St. Vincent's Hospitals, Toledo, Ohio, etc. Philadelphia: Lea and Febiger. 1939. Price, \$4.00.*

THE author and McKesson, the originator of many anesthetic machines, have worked out a complete technic of nitrous oxide-oxygen anesthesia that may be used for any type of surgical procedure. Full details are given, the basic science of nitrous oxide anesthesia discussed, and methods of application explained.

The author decries the idea that nitrous oxide cyanosis, *per se*, is harmful. He believes that one of the great advantages of nitrous oxide over other anesthetics is that it rarely causes nausea and vomiting. He mentions one case in which respiration ceased twice while nitrous oxide was being given to an extremely anemic patient for extraction of teeth (certainly not an operation of necessity), yet the anesthetic was changed in strength three times and the procedure finished.

It is often difficult, in judging medical writing, to tell whether an author is a genius or a fanatic. To those physicians who have delivered "blue" babies from cyanotic mothers under nitrous oxide anesthesia; those surgeons who have endeavored to perform delicate operations despite a marked lack of relaxation; and those skilled anesthetists who have long ago given up nitrous oxide as an inefficient and asphyxial agent, must be left the decision.

Bacteriology

Zinsser and Bayne-Jones

A TEXTBOOK OF BACTERIOLOGY: The Application of Bacteriology and Immunology for Students and Practitioners of Medicine and Public Health. By HANS ZINSSER, M.D., *Consulting Bacteriologist to the Peter Bent Brigham Hospital and the Children's Hospital, Boston*, and STANHOPE BAYNE-JONES, M.D., *Professor of Bacteriology and Dean, Yale University Medical School; Master of Trumbull College, Yale University, New Haven, Connecticut. Eighth Edition, Revised and Reset. New York and London: D. Appleton-Century Company. 1939. Price, \$8.00.*

ONE of the most famous texts on bacteriology has been completely reworked and revised to include recent advances in the field, such as bacterial variability ("This is somewhat confusing to the technician with the limited objective of tagging organisms, but it is the breath of biological life in the body of science"), bacterial metabolism, serologic groupings of streptococci, *Rickettsiae* investigations, chemical studies on viruses, and bacterial chemotherapy.

The student and physician will find that the book has been made more useful by condensation and emphasis on clinical aspects, as well as technical aspects. By dividing the subject matter under each organism into paragraphs covering morphology and staining, biologic characteristics, resistance, cultivation, isolation, diagnosis, pathogenicity, and treatment (where specific treatment with serums is available), the practitioner can quickly find the scientific background of any disease in which he is interested.

The current tendency to include, under actino-

mycosis, such other invasive processes as madura foot, is noted. The common cold, the pneumococcus, and pneumonias are grouped together, to emphasize the modern viewpoint on their etiologic relationship.

Height Increase

Gerling

SHORT STATURE AND HEIGHT INCREASE. By C. J. GERLING. *Introduction by EDWARD PODOLSKY, M.D. New York: Harvest House. 1939. Price, \$3.00.*

THIS is the latest volume to be issued by Harvest House on medical topics of interest to the layman. Like its predecessors, it is well printed and written in an easy style.

Gerling's material is to be commended as to its authenticity and its recommendations that the layman should not be fooled into spending much money on fake cures and mechanical appliances.

He covers every angle of the subject—height in adults, inheritance of stature, mechanism of growth, glands and growth, food and growth, sleep and growth, age and growth, disease and growth, drugs and height, exercises and height, devices and height, posture and height, clothes and height, weight and height, tables of heights, stature aids, and psychologic aids.

Through exercises and proper posture, he says, the short person may definitely increase his height. Very good advice to the parent is that diabetes and other illnesses may cause short stature.

Asthma

Coke

ASTHMA. By FRANK COKE, F.R.C.S., *with the Collaboration of HARRY COKE, M.R.C.S., L.R.C.P., Honorary Physician, Charterhouse Rheumatism Clinic. Second Edition; Fully Revised and Illustrated. Baltimore: The Williams and Wilkins Company; A William Wood Book. 1939. Price, \$4.00.*

COKE's work will be of interest to every general practitioner and to the allergist who finds that his method of treating asthmatic patients is not so effective as he wishes. Coke considers all aspects of the asthma problem, including the basic problems of anaphylaxis and allergy, etiologic factors and influences of atmospheric conditions, exercise, emotions, the signs and symptoms of an asthmatic attack, the diagnostic steps (in detail), and full methods of treatment. Many brief case histories are given throughout, to illustrate important points.

This second edition has been thoroughly revised and is a worthwhile addition to any physician's bookshelf.

Urine Examination

Dukes

URINE EXAMINATION AND CLINICAL INTERPRETATION. By C. E. DUKES, M.Sc., (LOND.), M.D. (EDIN.), D.P.H. (LOND.), *Pathologist to St. Peter's Hospital for Stone and other Diseases of the Urinary Organs, London; Pathologist to St. Mark's Hospital, London, New York, and Toronto; Oxford University Press. 1939. Price, \$8.00.*

THE average physician would think it a bit difficult to write, and altogether too difficult to peruse a book on such a simple subject as the urine. It is a far cry from the day when two chemical tests and the examination of an unstained smear constituted a complete urinalysis. Nowadays, diagnosis of many endocrine conditions can be made by estimating the amount of estrogens and androgens in the urine. The Friedman or Aschheim-Zondek test give information relative to pregnancy, fetal death, abortion, extra-uterine pregnancy, hydatidiform mole and chorionepithelioma, retained placenta, acromegaly and pituitary tumors, and tumors of the ovary and testicle.

In aiding the difficult diagnosis of chronic gonorrhea in the female, the author suggests that a small plug of gauze soaked in glycerin be inserted into the cervix and left there for 24 hours.

The discharge is collected for examination when the gauze is removed.

The physician who must carry out his own urinalyses, the intern, and the student will give a shout of joy when they see the complete detail given on practical urinalysis. Every type of cast and crystal is sketched in a clear, realistic manner, so that it may be recognized at once. This is the only book on this subject that has such an array of informative line drawings. Foreign or extraneous matter, including starch cells of various types, air bubbles, oil globules, fibers, spermatozoa, human hair, all are illustrated well.

For those physicians who do not carry out or directly supervise the performance of urine examinations, the author devotes a portion of the text to a discussion of the significance of the various tests and findings, so that the clinician may call for all the needed examinations and know their limitations.



Nutrition and Diet

McLester

NUTRITION AND DIET IN HEALTH AND DISEASE. By JAMES S. McLESTER, M.D., *Professor of Medicine, University of Alabama, Birmingham, Alabama. Third Edition, Entirely Revised, Philadelphia and London: W. B. Saunders Company. 1939. Price, \$8.00.*

THIS book gives confirmation to the belief that nutrition is a division of medicine and that it may be best applied by a physician. The biochemist must prepare the way with research and the dietitian may be needed to individualize a program, but it is the physician alone who can combine nutrition with other methods of treatment into a harmonious, effective whole. McLester does not present a mere list of foods to be eaten and to be avoided in each disease, as if the practitioner lacked the intelligence to do more than copy from a text, but gives a general discussion of the aims to be attained and the nutritional therapy to be used, and then gives diets which are sufficiently detailed so as to be readily followed by the average housewife.

His reasons for advising weight reduction are valuable to the physician who wishes to persuade an overweight patient to reduce. Just as important are the cautions against endeavoring to reduce the weight of those who are suffering from a chronic, moderately-advanced illness such as myocardial failure or nephritis, unless it be done cautiously and with the patient in bed for the greater part of the time.

The physician finds, in this one, inexpensive volume, all that is important concerning the nutritional and general management of patients who are suffering from every type of illness (blood diseases, diseases of heart and arteries, arthritis, nervous-system diseases, goiter, skin diseases, nutritional deficiency diseases, diabetes, hypoglycemia, gout, obesity and leanness, food poisoning and allergy, kidney and urinary tract diseases, diseases of digestive organs and fevers), and in addition, infant feeding, surgical feeding, and important advances in nutrition.

Chronic Arthritis

Monroe

CHRONIC ARTHRITIS. By ROBERT T. MONROE, A.B., M.D., *Licentiate of American Board of Internal Medicine; Associate in Medicine, Harvard University; Physician, Peter Bent Brigham Hospital, Boston; Visiting Physician and Chief of Medical Staff, Long Island Hospital. Edited by HENRY A. CHRISTIAN, A.M., M.D., LL.D., Sc.D. (Hon.), F.R.C.P. (Hon.), Hersey Professor of the Theory and Practice of Physic, Harvard University; Physician-in-Chief, Peter Bent Brigham Hospital, Boston. (Reprinted from Oxford Loose-Leaf Medicine.) New York, London and Toronto: Oxford University Press. 1939. Price, \$2.00.*

THIS little volume may well be kept close at hand, so that the physician will have authoritative guidance on a disease that is quite frequently poorly treated. Monroe has condensed the important pathologic, diagnostic, and therapeutic points concerning atrophic (infective), hypertrophic, and periarticular arthritis into 79 pages. Contrary to the usual custom, many pages are devoted to treatment and full details are given, including a diet that need only be copied directly for the patient's use, minute directions about rest, exercise, massage, medicine. His attitude toward vaccines is properly conservative.

He discards the use of many proper names (Still's disease, Feltz's syndrome, Strumpell-Marie arthritis), and recommends that such types of cases be considered as subdivisions of atrophic (infective) arthritis.



Pediatrics

Zahorsky and Zahorsky

SYNOPSIS OF PEDIATRICS. By JOHN ZAHORSKY, A.B., M.D., F.A.C.P., *Professor of Pediatrics and Director of Department, St. Louis University School of Medicine, and Pediatrician-in-Chief to the St. Mary's Group of Hospitals; Fellow of the American Academy of Pediatrics; Assisted by T. S. ZAHORSKY, B.S., M.D., Instructor in Pediatrics, St. Louis University School of Medicine and Assistant Pediatrician to the St. Mary's Group of Hospitals, St. Louis: The C. V. Mosby Company. 1939. Price, \$4.00.*

THE Zahorskys have presented, in brief, common-sense form, the rudiments of modern pediatrics. No attempt has been made to discuss unusual conditions at length or to present much detail on laboratory findings. This is a volume solely for the clinician, and proper emphasis is placed on symptoms, diagnosis, and treatment.

Therapeutic technic occupies a number of pages, and is well written, for the most part. Unfortunately, the extreme condensation affects the usability of a portion of this material. Those who have observed the dramatic respiratory excursions immediately following the injection of Albalobelin into the umbilical vein of the newborn infant, will feel that a valuable method had been slighted.

New Books Received

The following books have been received in this office and will be reviewed in our pages as rapidly as possible.

AN INTRODUCTION TO GASTRO-ENTEROLOGY. Being the Third Edition of *The Mechanics of the Digestive Tract*. By WALTER C. ALVAREZ, M.D. New York: Paul B. Hoeber, Inc. 1940. Price, \$10.00.

INDUSTRIAL HYGIENE. By Various Authors. Edited by A. J. LANZA, M.D. and JACOB A. GOLDBERG, M.A., Ph.D. New York: Oxford University Press. 1939. Price, \$3.50.

HANDBOOK OF SKIN DISEASES. By LEON HUGH WARREN, B.A., M.D., M.Sc. (Med.). With a Foreword by FREDERICK D. WEIDMAN, M.D. New York: Paul B. Hoeber, Inc. 1940. Price, \$3.50.

EUROPEAN JUNGLE. By F. YEATS-BROWN. Philadelphia: Macrae-Smith Company. 1939. Price, \$3.00.

THE NEW INTERNATIONAL CLINICS. Edited by GEORGE MORRIS PIERCE, M.D. Volume IV, New Series Two. December, 1939. Philadelphia: J. B. Lippincott Company. 1939. Price, \$3.00, current year; \$5.00, back years.

MEDIZINISCHE PRAXIS SERIES. Volume 20, Diätetik. Die Ernährung des Gesunden und des Kranken. By PROF. DR. MED. W. KUPKE. Dresden and Leipzig: Verlag von Theodor Steinkopff. 1940. Price, RM 7.13, paper bound; RM 8.10, cloth bound.

—Medical News—



Kobel Feature Photos.

World's Most Beautiful Physician

THE title heading this paragraph has frequently been bestowed upon Dr. Maria Ehrenstein, of Vienna, Austria. After studying the evidence presented above the title, our readers may use their own judgment. It is said that she finds all her male patients between 14 and 84 suffering from tachycardia, with occasional missed beats.

Mississippi Valley Medical Society 1940 Essay Contest

THE Mississippi Valley Medical Society offers annually a cash prize of \$100, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics) and practical value to the general practitioner of medicine. Contestants must be members of the American Medical Association who are residents of the United States. Contributions shall not exceed 5,000 words, be typewritten in English in manuscript form, submitted in five copies, and must be received not later than May 1, 1940. Further details may be secured from Harold Swanberg, M.D., Secretary, 209-224 W. C. U. Building, Quincy, Ill.

American College of Physicians

THE American College of Physicians will hold its annual meeting at Cleveland, Ohio, April 1 to 5, inclusive, 1940. The graduate instruction presented at these meetings, in the form of lectures, clinics, and laboratory demonstrations, is of the highest value, and all who are entitled to attend should make arrangements to do so, and secure hotel reservations, without delay.

Dr. Blakeslee New President of A. A. A. S.

AT THE RECENT annual meeting of the American Association for the Advancement of Science, Albert F. Blakeslee, D.Sc., Ph.D., geneticist of the Carnegie Institution, was elected president of the Association. Recently Dr. Blakeslee has been making some astonishing discoveries by treating plants with colchicine, which doubles the chromosomes and produces entirely new species, which thereafter breed true.

Oral "Cold" Vaccine Works

DR. LEONARD J. PICCOLI, Fordham University College of Pharmacy, reports that 3,000 people who had taken a "cold" vaccine by mouth, had only one-fourth as many colds during a year as another 3,000 who had had no vaccine. Other large-scale tests of this type of vaccine have shown results similar to those of Dr. Piccoli.

X-Rays in Carbon Monoxide Poisoning

DR. JOHN A. CAMERON, of the University of Missouri, has recently reported that recovery from carbon monoxide poisoning is greatly hastened by the administration of moderate doses of x-rays. At this season of the year, when such poisoning is most common, physicians will be wise to look into this matter carefully.

Diabetes and Hyperthyroidism

DR. THEODORE L. ALTHAUSEN, of the University of California, was recently awarded the Van Meter Prize of \$300 by the American Association for the Study of Goiter, for his discovery of a method of distinguishing between true diabetes mellitus and the glycosuria which is often present in patients with hyperthyroidism. The test consists of feeding the patient 40 Gm. of galactose, and testing the blood for that particular sugar one hour later. A normal person will show from 20 to 30 mg. per 100 cc.; a hyperthyroid, about 70 mg.; and a diabetic, whose thyroid is not overactive, the same as a normal person, though his blood may be loaded with other sugars.



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| 6 Dr. Weirick's Sanitarium. Dr. G. A. Weirick. | 31 The Germicidal Efficiency of the Vaporized Cresols of Coal Tar. Vapo-Cresolene Co. |
| 9 Elixir Bromaurate in the Treatment of Whooping Cough and other Persistent Coughs. Report of Cases. (Booklet.) Gold Pharmacal Co. | 33 Foot Weakness and Correction for the Physician. The Scholl Mfg. Co., Inc. |
| 11 Chondroitin; for Treatment of Idiopathic Headache. The Wilson Labs. | 41 Oreton—Male Sex Hormone. Schering Corp. |
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| 20 Hyperol. A Utero-Ovarian Tonic and Corrective. Purdue Frederick Co. | 50 Gestasol. The Follicular and Luteinizing Fractions obtained from Human Placentae. The National Drug Co. |
| 21 Gray's Compound. Purdue Frederick Co. | 54 Use of Zinc Borate in Otolaryngology. Hille Laboratories. |
| 22 Feeding Sick Patients. Knox Gelatine Labs. | 78 Argyrol in Urology and Gynecology. A. C. Barnes Company. |
| 25 Clinical Guide for Female Sex Hormone Therapy. Schering Corp. | 91 Adrenal Cortex; for the Treatment of Addison's Disease and Asthenia. The Wilson Labs. |

- 99 A Survey in Two Fields of Medicine. A. C. Barnes Co.
- 100 Neo-Plasmoid. The Modern Solution for the Injection Treatment of Hernia. Farnsworth Labs.
- 111 Argyrol in Ophthalmology. A. C. Barnes Company.
- 123 Resumé of Venereal Therapy. Mallinckrodt Chemical Works.
- 130 Allantoin Ointment 2% in Slow and Non-healing Wounds and in Burns. The National Drug Co.
- 135 Argyrol in Otorhinolaryngology. A. C. Barnes Co.
- 137 Barium Sulfate. Resumé of Use in Alimentary Roentgenology. Mallinckrodt Chemical Works.
- 146 Moru-Quin for Injection Treatment of Varicose Veins. The National Drug Co.
- 148 Ampoule Products for Subcutaneous, Intramuscular, and Intravenous Medication. Associated Physicians Labs.
- 151 Cofron Liver Concentrate. Abbott Labs.
- 154 Cyclopropane for Anesthesia. Mallinckrodt Chemical Works.
- 155 Alkali or Calcium, Which Shall It Be? Wm. R. Warner & Co., Inc.
- 157 Galatest—A New Micro-Reagent for Instantaneous Detection of Urine Sugar. The Denver Chem. Mfg. Co.
- 159 Zemacide, an Efficient and Dependable Local Application for Eczema. The Tilden Co.
- 166 The Dowling Treatment. Thirty Years of Observation and Results. A. C. Barnes Co.
- 168 Low Back Pain, Sarapin, and Neuralgias. High Chemical Co.
- 173 APEstrin in Utero-ovarian Insufficiencies. The Harrower Lab., Inc.
- 174 Peptic Ulcer Dietary. Knox Gelatine Labs.
- 175 Modern Estrogenic Hormone Therapy. Reed & Carnrick.
- 176 Cortinoral. A Standardized Lipid Extract of Adrenal Cortex for Oral Use. The Harrower Lab., Inc.
- 177 The Medicinal Therapy of Hypertension. (Reprint.) Grant Chemical Co.
- 178 A Summary of Useful Data Concerning Chronic Derangements of the Biliary Tract. The Paul Plessner Co.
- 179 Plestrin in Oil. A Standardized Estrogenic Hormone. The Harrower Lab., Inc.
- 180 Diatussin—For the Symptomatic Relief of Whooping Cough. Ernst Bischoff Co.
- 181 Speaking of Constipation. Wm. R. Warner & Co., Inc.
- 182 Abbott's A-B-D-Gr. Capsules, Improved. Abbott Laboratories.
- 183 Fatigue and the New Way to Avoid It. Knox Gelatine Labs.
- 184 Lobelin-Bischoff — Saves Lives by Direct Stimulation of the Respiratory Center. Ernst Bischoff Co.
- 185 Lydin—Biologically Standardized Male Sex Hormone. The Harrower Lab., Inc.
- 186 New Scarlet Fever Toxin. The National Drug Co.
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